

OCTOBER 1, 1953

# MODERN *The Journal of Diagnosis and Treatment* MEDICINE



Dr. Walter B. Hoover

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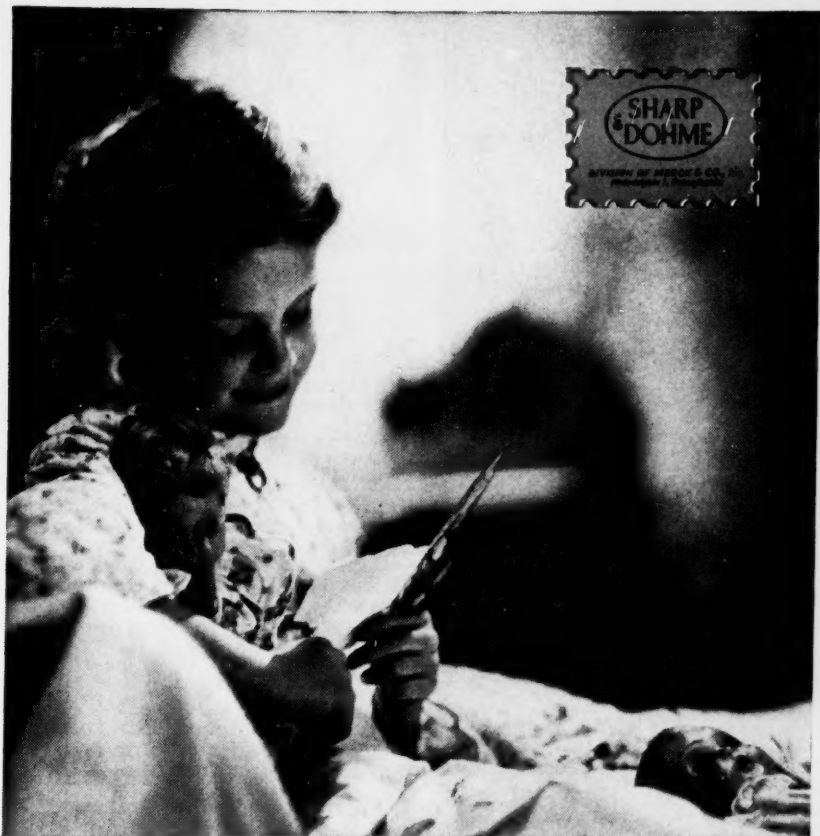


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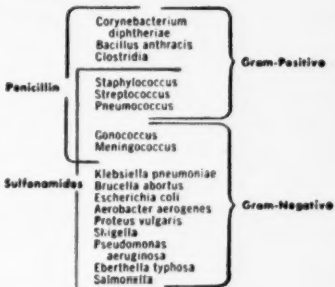
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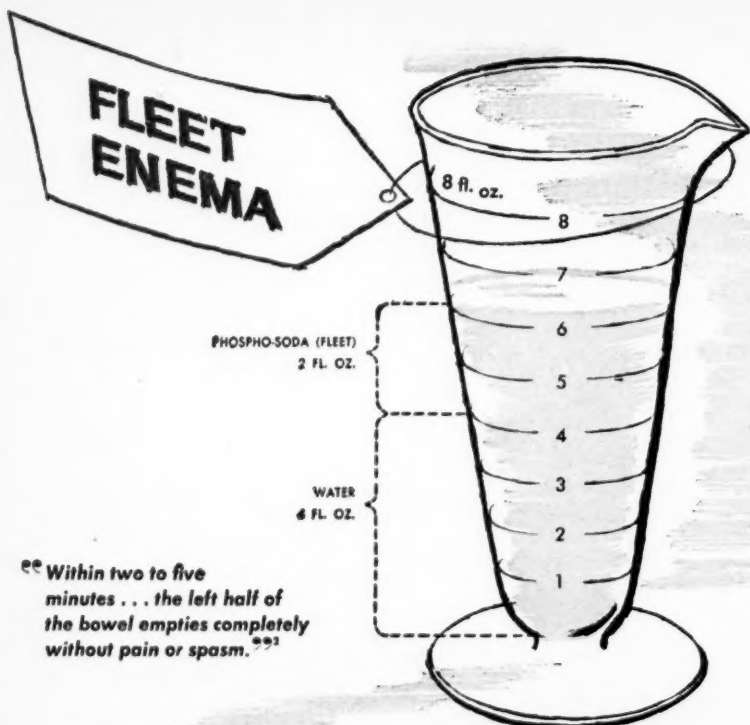
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1. Burnikel, R. H. and Sprecher, H. C.: *Am. J. Dig. Dis.* 19:191, 1952.
2. Marks, M. M.: *Am. J. Dig. Dis.* 18:219, 1951; personal communication, 1952.
3. Sweatman, C. A.: *J. South Carolina M. A.* 49:38, 1953.
4. Hamilton, H.: *Trans. 5th Am. Cong. Obst. & Gyn., Mosby, 1952, p. 69.*

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October 1

1953

Modern Medicine

Vol. 21, No. 19

THE MAN ON THE COVER is Dr. Walter B. Hoover of Boston, Chief of the Department of Otorhinolaryngology at the Lahey Clinic since 1928. He is a special lecturer in otolaryngology at Tufts College and a staff member of New England Deaconess, New England Baptist, Booth Memorial, and Massachusetts Woman's hospitals. He is a member of the American Academy of Ophthalmology and Otolaryngology, American Laryngological, Rhinological, and Otological Society, and New England Otological and Laryngological Society, of which he is a past president. Dr. Hoover is a frequent contributor to medical journals. A report of his article, "Emergency Tracheotomy," appears on page 101.



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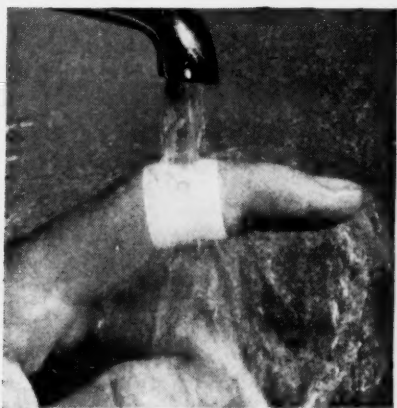
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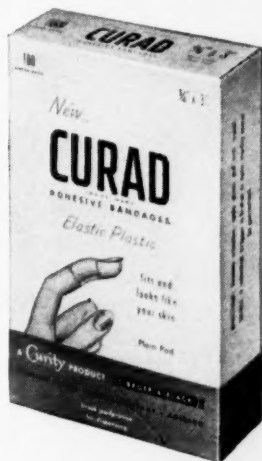


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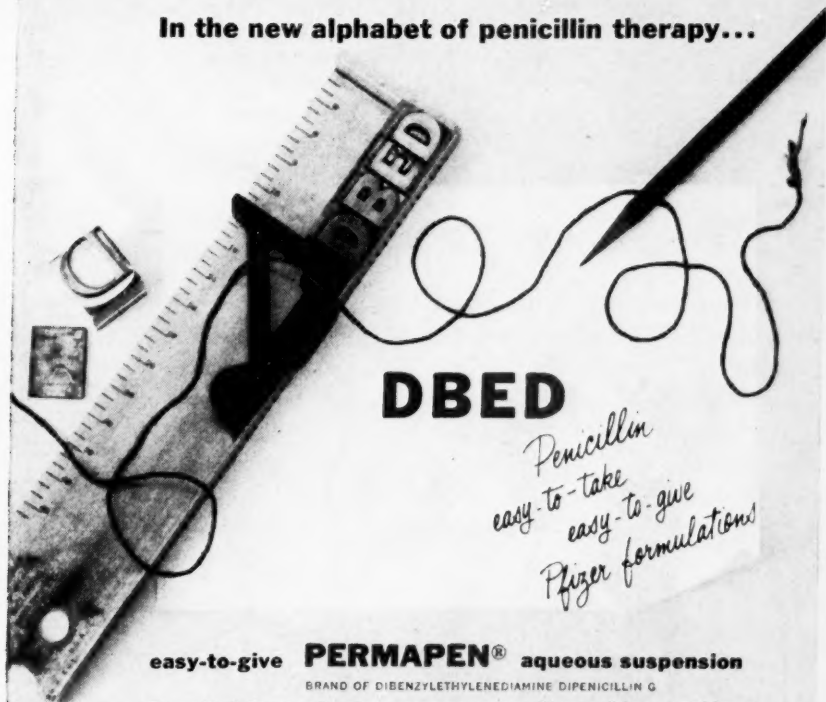
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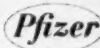
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## LETTER FROM THE EDITORS

---

*Dear Reader:*

More than a million copies of a Modern Medicine Special Article, "Alleviation of Anxiety during Pregnancy," have been distributed by physicians to their patients.

The article was published in our issue of May 1945. It was the outgrowth of answers to questions commonly asked by expectant mothers. World War II had served to emphasize the unusual apprehension felt by pregnant women toward childbirth. Demands of wartime practice made it impossible for the physician to take time to answer the questions of each patient individually. Dr. Biskind's printed answers filled the gap. He consented to prepare the article for *Modern Medicine* in the hope that other physicians would find it useful in maintaining cooperative effort between patient and physician.

Demands for reprints stimulated preparation of a companion piece, "Modern Prenatal Instructions," and subsequent publication of the two articles in book form, making the information available to all expectant mothers. The book, *Having Your Baby*, was published by Random House and is now in its second printing. The book is kept up to date by regular periodic revisions.

A thorough revision of the section on prenatal instructions has just been completed. We are as pleased with this new section as we were with Dr. Biskind's original manuscript, and we think you will be, too. It is presented as a Special Article on page 113 of this issue.

We are grateful to Dr. Biskind and to his publishers, Random House, for their cooperation in making this presentation possible.

*The Editors*

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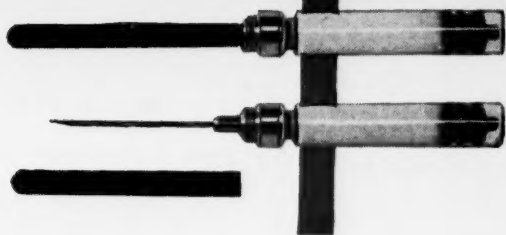


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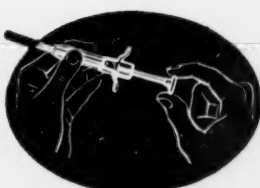
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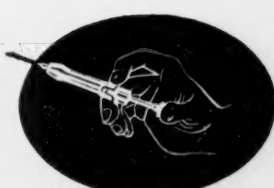
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# Correspondence

Communications from the readers of MODERN MEDICINE are always welcome. Address communications to The Editors of MODERN MEDICINE, 84 South 10th St., Minneapolis 3, Minn.

## Doubts Smoker's Syndrome

TO THE EDITORS: While I respect Dr. George L. Waldbott for his fine work in allergy, I have never encountered, and I therefore question, the "smoker's respiratory syndrome" (*Modern Medicine*, Aug. 1, 1953, p. 67). I believe this entity results from chronic sinusitis.

Dr. Waldbott's description of symptoms may well apply to bacterial asthma. These symptoms are seen in active sinusitis among non-smokers and children and include chronic pharyngitis, constant hyperemia of the pharyngeal mucosa, lymphoid hyperplasia often covered with mucus, cough, and hoarseness. All patients tend to improve in the summer and fall when sinusitis is less troublesome. The lack of eosinophilia in the syndrome is to be expected in cases of bacterial asthma.

More than 50 patients have told me that they had eschewed smoking to relieve their "smoker's cough" and asthma. In contrast to Dr. Waldbott's experience, almost all of them renewed smoking after a trial without benefit.

If smoke is the incitant, the cough should be most severe when its concentration in the lung is greatest, namely, upon inhaling.

This does not occur except in the occasional novitiate. Rather, the cough and wheeze, induced by postnasal drainage during recumbency, are usually noted upon arising, several hours after smoking is discontinued for the night.

EDWARD E. BROWN, M.D.  
Ashland, Ore.

## Excellent Condensations

TO THE EDITORS: I find *Modern Medicine* an informative and progressive publication. Condensation of articles is excellent. Dr. Bruce K. Wiseman's article, "Dangers of Blood Transfusions" (Aug. 1, 1953, p. 76), was of particular interest to me and my staff.

CAPT. D. O. ZEARBAUGH, M.C., U.S.N.  
Oakland, Calif.

## Smoke Remover

TO THE EDITORS: The smoke from fulguration of bladder tumors often obscures the field of operation. I have found that a suction apparatus will remove the smoke, clear the field, and expedite the operation. I hope others will try it with the same happy results.

GEORGE R. LIVERMORE, M.D.  
Memphis

## Major advance in dermatitis control:

*The new direct approach* to the control of dermatitides is hormonal, enlisting the antiphlogistic and antiallergic potency of compound F—foremost of the corticosteroid hormones.

*The new objective* is adapting corticoid therapy to simple inunction treatment, and obtaining relief in various forms of dermatitides within days—sometimes within hours.

*The new attainment* is Cortef Acetate Ointment, which rapidly controls edema and erythema, halts cellular infiltration, arrests pruritus in such harassing skin problems as atopic dermatitis, contact dermatitis, pruritus vulvae and ani, neurodermatitis, and seborrheic dermatitis.

# Cortef<sup>\*</sup>

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Ointment

**Supplied:** Cortef Acetate Ointment is available in 5 Gm. tubes in two strengths—2.5% concentration (25 mg. per Gm.) for initial therapy in more serious cases of dermatitis, and 1.0% concentration (10 mg. per Gm.) for milder cases and for maintenance therapy.

**Administered:** A small amount is rubbed gently into the involved area one to three times a day until definite evidence of improvement is observed. The frequency of application may then be reduced to once a day or less, depending upon the results obtained.

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## Whither Psychiatry?

TO THE EDITORS: That people nowadays are "allergic" to psychiatrists seems to be the bitter truth. Consultation with a psychiatrist is taboo. Once a psychiatrist visits you something is wrong with your head. You are branded. You are questionable to society. This may be the reason many people shy away from psychiatric contact.

Nothing can be more detrimental. Disorders of the mind or central nervous system are bereft of the advantages of early diagnosis and treatment. Procrastination abets the spread and hold of the disease. Mental health is cruelly sacrificed for social expediency.

Some patients resent psychiatric intervention because they love to keep and nurture their maladies. These neurotic individuals want to be treated as if they were terribly sick in order to gain attention. They very well know that a psychiatrist may "squeal" on them, lecture them, or tell them bluntly that they are plain lazy.

The really neuropathologic cases, from an instinct of self-preservation, we might say, turn away from the psychiatrist who would return them to the world of cold reality. Their relatives openly abhor psychiatrists.

Once, in a case of peptic ulcer, I asked an internist, "How about enlisting the aid of a psychiatrist in view of the fact that the psychic factor plays a major role in the causation of the disease?"

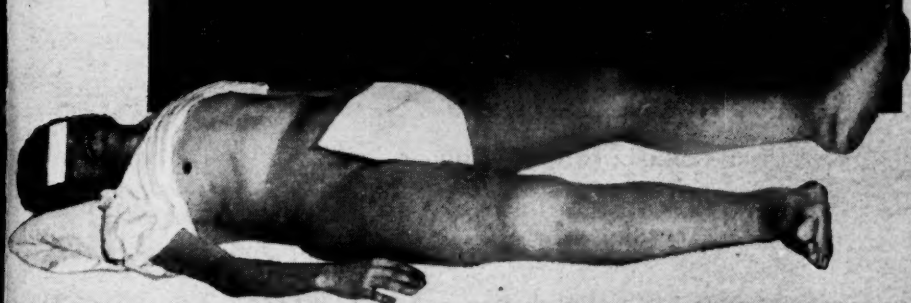
The internist replied, "The patient would be on guard if we employed the services of a psychiatrist. It wouldn't do him any good."

Et tu, Doctor?

(Continued on page 26)

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*Moderate diuretic action, sustained effectiveness, and minimal toxicity* ... a clinically desirable compound that makes Calpurate a preferred diuretic in long-term therapy. Calpurate also stimulates cardiac output.

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Usual adult dose is 1 or 2 tablets t.i.d., following meals. Where there is a pathological accumulation of fluid, 2 tablets at two-hour intervals for three doses, with a pause until the following day, frequently produces a greater diuresis and avoids habituation.

Usual adult dose of Calpurate with Phenobarbital is 1 or 2 tablets t.i.d., following meals.

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Tablets—16 mg. (½ gr.)

phenobarbital per tablet

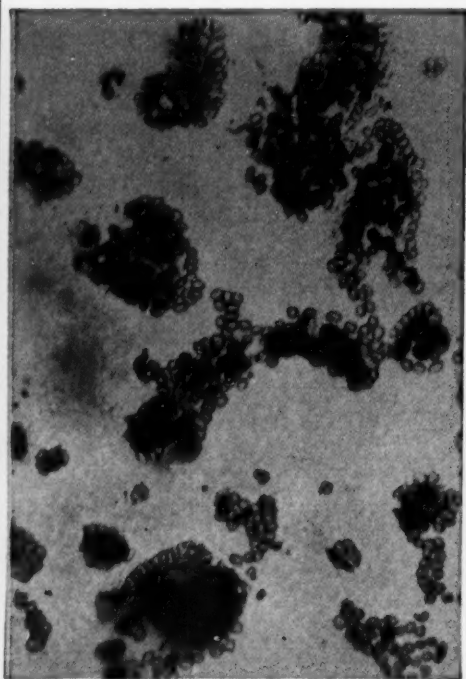
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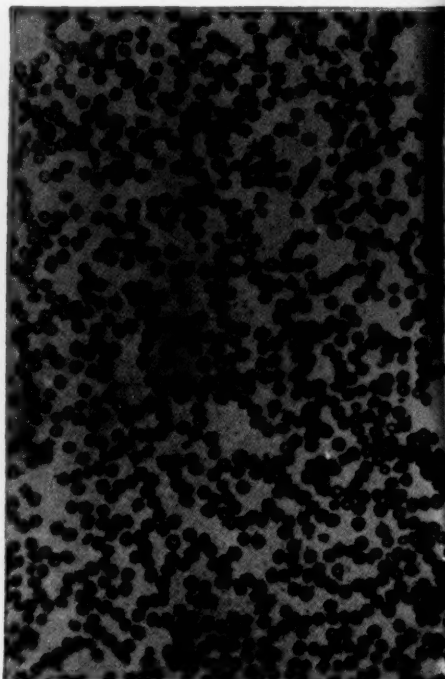
# VISUAL PROOF

The photomicrographs illustrate the action of therapeutic level cobalt in producing actual regeneration of erythrocytes and their precursors even in severely *depressed human bone marrow*.<sup>1</sup>

Because of extensive clinical studies with RONCOVITE—the original cobalt product—this understanding of direct stimulation of the depressed bone marrow has brought a completely new approach to the treatment of “secondary” anemia.



Bone marrow showing—acquired erythrocytic hypoplasia—no nucleated erythrocytes.



Same patient showing—active erythropoiesis following cobalt therapy.

## *...of the Unique Hematologic Action of Therapeutic Cobalt*

### **In Anemia Accompanying Infection—Roncovite**

—provides such a significant advance in treatment of this usually refractory condition—acts so dramatically—that in severe cases *it may make transfusion unnecessary.*<sup>2</sup>

### **In Prolonged "Low-Grade" Anemias—**

—where the response to iron is often relatively slow and unsatisfactory—Roncovite produces a 4-fold increase in erythrocyte production and an accelerated rate of hemoglobin synthesis.<sup>3</sup> In these cases Roncovite overcomes the erythropoietic inhibition which has blocked improvement in the blood picture.

Roncovite provides successful therapy in the great majority of *all* the microcytic anemias commonly seen in practice. (Roncovite is of the same low order of toxicity as iron.)

### **Subjective Improvement as Well—**

Improvement is often rapid, with the patient voluntarily reporting an increased sense of well being within a few days. Such results have been documented and repeatedly confirmed in clinical use.

**Suggested Dosage:** One tablet four times daily in adults; 0.6 cc. daily in infants.

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### **DOSAGE FORMS**

*Roncovite Tablets*—enteric coated, red, each contains cobalt chloride, 15 mg.; ferrous sulfate, 0.2 Gm.; bottles of 100.

*Roncovite Drops*—each 0.6 cc. contains cobalt chloride, 40 mg.; ferrous sulfate, 75 mg.; bottles of 15 cc. with calibrated dropper.

*Write for literature and complete bibliography.*

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IN THE INTEREST OF MEDICINE SINCE 1870

1. Case 2, Seaman, A. J.; and Koler, R.; *Acta Hematologica*, 9:153, 1953.

2. Gardner, Frank H.; *J. Lab. Clin. Med.*; 41:56, 1953.

3. Rohn, R. J. and Bond, Wm. H.; *J. Lancet*, 73:301, 1953.

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Why is there a growing revolt of many laymen and doctors against psychiatry and specialized medicine in general? What is the remedy? Fewer psychiatrists? Fewer specialists? More general practitioners who are the trusted friends and loved doctors of our families? Or shall it be more general practitioners with more training in psychiatry?

These questions challenge the psychiatrist today. The answers are vital.

Because of their training, the psychiatrists stand on advantageous ground to answer the challenge. They must focus the searchlights on themselves and reevaluate their role. Then, perhaps, the modern approach to psychiatry will be realistic and satisfactory from every angle.

ERNESTO C. DEZA, M.D.

Knoxville

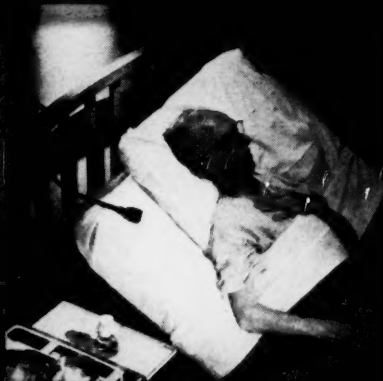
## Diagnostic Gynecography

TO THE EDITORS: I noted the controversy that recently appeared in *Modern Medicine* regarding the necessity for hospitalization for the performance of diagnostic gynecography (Aug. 1, 1953, p. 24).

Originally, we performed this test as a hospital procedure, keeping the patient in the hospital for twenty-four hours. However, for more than ten years now, we have performed this test upon ambulatory patients in the x-ray department of the hospital and in private x-ray laboratories.

All that is required is that the patient be permitted to remain recumbent for about one hour after completion of the test. In this way,

(Continued on page 30)



an agent of choice in urinary tract infections

- promptly effective against a broad-spectrum of urinary pathogens
- high concentration in active form in urinary tract
- well tolerated, even upon prolonged administration

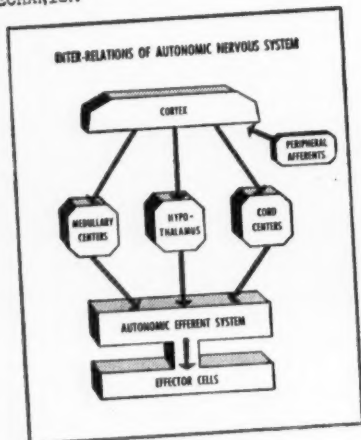
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urologists everywhere  
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# Mechanism of Functional Disorders

## MECHANISM



The accompanying diagram shows the great role the hypothalamus plays in the initiation and exchange of autonomic impulses

Effects of emotion, cortical activity, or injury pass through to produce changes via the autonomic nervous system. Why the parasympathetic is stimulated in one instance and the sympathetic in another is still undetermined.

Lyons, R.H., and Caliva, F.S.:  
New York State J. Med. 50: 1801 (Aug.) 1950

## DIAGNOSTIC SYMPTOMS

Diagnosis requires identification of symptom complexes resulting from functional disorders as well as organic disease. Physical examination, history, and laboratory tests must be evaluated in the light of the patient's emotional status.

Fatigue - headaches - nervousness - exhaustion - insomnia  
-- are typical results of long standing and unremitting emotional tension and strain.

Watts, M.S.M., and Wilbur, L.L.: J.A.M.A. 148: 704 (March) 1952

Every organ system can be affected. Some of the commonly elicited symptoms are:

Tachycardia; Bradycardia; Amenorrhea; Nausea, vomiting, diarrhea; Functional hypoglycemia; Hypertension; Pylo-rospasm; Angina pectoris; Back pain; Dysmenorrhea.

# Treatment of Functional Disturbances with BELLERGAL

## BASIS OF TREATMENT

"It is obvious that autonomic nervous system imbalance must be controlled before symptomatic relief is possible. This can be accomplished primarily through the use of proper drugs associated with adequate psychotherapy."

Favata, B.V.: M. Times 81: 54 (Jan.) 1953

## RESULTS OF THERAPY

Bellergal acts as an autonomic nervous system stabilizer. Although the individual components of Bellergal inhibit respectively the central nervous system as well as the sympathetic and parasympathetic, the effect is that of a single unit.

The following table summarizes the results obtained with Bellergal in the treatment of various functional disorders:

COMPILATION OF RESULTS IN VARIOUS  
FUNCTIONAL DISORDERS OBTAINED WITH BELLERGAL

CONDITION	NO. OF PTS.	EXCELLENT	GOOD	FAIR	POOR
Cardiovascular <sup>1</sup>	41	20	10	9	2
Urinary <sup>1</sup>	19	4	10	4	1
Gastrointestinal <sup>1</sup>	52	20	18	8	6
Interval of migraine <sup>1,3,4,6</sup>	120	51	52	6	11
Menopausal symptoms <sup>2</sup>	196	131	30	11	24
Tuberculosis symptoms night sweating, etc.	43		39		4
Various gynecological symptoms <sup>3</sup>	303	141	133		29
	774	367	292	38	77
		48%	38%	4%	10%

1. Bankoff, M.: Treatment of Symptoms, Michigan City, Indiana.  
2. Kavinoky, N.R.: J. Am. M. Women's A. 7: 294 (Aug.) 1952. 3. Wittich, F.W.: Ann. Allergy 10: 620 (Sept.-Oct.) 1952. 4. Hilsinger, R.L.: Laryngoscope 61: 296 (April) 1951. 5. MacFadyen, B.V.: Am. Pract. 2: 1028 (Dec.) 1951.

In addition, effectiveness of Bellergal was reported by the following (although no statistics were given):

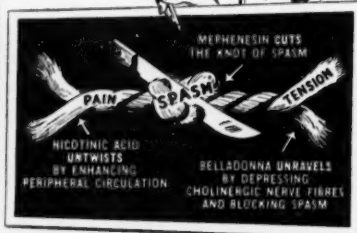
6. Bernstein, A.: Am. Pract. & Digest Treat. 4: 321 (May) 1953.  
7. Favata, B.V.: M. Times 81: 54 (Jan.) 1953. 8. Cerulli, F.: Am. J. Psychiat. 108: 779 (April) 1952. 9. Yontef, R.: J. M. Soc. New Jersey 48: 462 (Oct.) 1951. 10. Rothlin, E.: Schweiz. med. Wchnschr. 64: 188, 1934.

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Belladonna Extract ..	5 mg.

Separately, LATRODOL's components accomplish only part of the desired relaxing action; but together, they create a physiologically synergistic three-way action in arresting the spasm-pain-tension cycle.

*Indicated in painful spasms accompanying: rheumatic and arthritic conditions, low back pain, sacroiliac pain, stiff neck, muscle "stiffness", anxiety-tension states; wherever rapid relaxation is desired.*

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# LATRODOL

PATENT PENDING  
(NASON'S)

the discomfort from shoulder pain is rarely more than that experienced after the Rubin test; the discomfort can be relieved by analgesics.

IRVING F. STEIN, SR., M.D.  
Chicago

► TO THE EDITORS: Since 1924, while medical director of a tuberculosis sanatorium, I have employed artificial pneumoperitoneum, first using oxygen in treating tuberculous enterocolitis, later using air in treating pulmonary tuberculosis. Naturally at that time the treatments were given with the patients either in their beds or in a special treatment room. For the past fifteen years, I have used artificial pneumoperitoneum as a routine office procedure, the patients getting up immediately and going about their usual daily routine.

The procedure is simple and safe. All that is needed, in addition to the pneumothorax apparatus, is an ordinary 3- or 4-in., 18-gauge needle. Not even a knife is necessary to nick the skin. Novocain is used if the patient desires. No drapes or rubber gloves are needed; alcohol is adequate on the skin.

Long ago I became convinced that people are immune to their own germs, so the only indispensable aseptic precaution is not to contaminate that portion of the needle entering the patient's abdomen. Some of our female patients have put zippers in the front of their clothes, thus avoiding disrobing.

*Pneumoperitoneum Treatment* by Andrew Banyar, published by C. V. Mosby Company, would be worthwhile reading for gynecologists using artificial pneumoperitoneum.

R. L. LANEY, M.D.  
Joplin, Mo.



**The "BLUE RIBBON" for  
effective ARTHRITIS treatment**

A-C-K tablets (G. F. Harvey) combine Aspirin with vitamins C and K in a proven, effective, sodium-free combination which allows therapeutically high blood levels of salicylate with maximum safety. By furnishing adequate replacement amounts of Vitamins C and K in each tablet, A-C-K guards against lowered prothrombin level, hemorrhage, and other toxic manifestations of the salicylates.

Each tablet contains:

Acetylsalicylic Acid.....333 mg. (5 gr.)  
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Menadione.....0.33 mg. (1/200 gr.)  
Dosage: 2 tablets every 2 hours or as directed by physician.

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## Questions & Answers

*All questions received will be answered by letter directed to the petitioner; questions chosen for publication will appear with the physician's name deleted. Address all inquiries to the Editorial Department, MODERN MEDICINE, 84 South Tenth Street, Minneapolis 3, Minnesota.*

---

**QUESTION:** A patient with osteoarthritis has daily distress and pain. He does not tolerate aspirin, and I dislike giving cortisone. Can anything be done for enlarged joints? Can you suggest a safe, effective treatment? Is a change of climate helpful?

M.D., Maine

**ANSWER:** *By Consultant in Orthopedics.* General measures such as supporting bandage, heat, and reduction of physical activity often give considerable relief. Injection of hydrocortone into individual joints may relieve pain.

Enlargement of the joint usually indicates hypertrophic bony changes and no particular treatment is required.

Change of climate is generally not helpful, although many patients prefer to live in states where the climate is mild and dry.

**QUESTION:** An 18-year-old girl has a profuse growth of hair on her face and neck. Since she is of Italian and Irish descent, she has dark hair and olive coloring. What treatment do you recommend to control this condition?

M.D., Indiana

**ANSWER:** *By Consultant in Dermatology.* The girl should be thoroughly examined for endocrine abnormality. Rarely, however, is overt endocrine disease found in cases of

hirsutism. The condition is usually familial or racial in background. The only satisfactory treatment with lasting effect is electrolytic removal of each hair. Obviously, this procedure is time consuming and somewhat expensive, but is the best available. In some cases, the appearance is improved by bleaching, but this process is not apt to prove satisfactory for this patient. Removal by wax application probably would not succeed in this case.

**QUESTION:** Many years ago a disease was discovered in France that had many symptoms of our poliomyelitis. What is the name of this neuromuscular disease?

M.D., Illinois

**ANSWER:** *By Consultant in Neurology.* The disease described in France resembling poliomyelitis is known as the Guillain-Barré syndrome. However, in contrast to poliomyelitis, the sensory component of the nervous system is frequently involved, causing radicular pain, muscle tenderness, and hypesthesia of the extremities. Generally this disease produces no systemic involvement; the patients are afebrile and show no increase in temperature or leukocytes.

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more physicians than  
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162 mg.  
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194 mg.  
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16.2 or 32.4 mg.  
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PHOSPHATE 16 Gr.**  
(PHENAPHEN No. 2)

**PHENAPHEN with CODEINE  
PHOSPHATE 32 Gr.**  
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**QUESTION:** A well-nourished patient has a pulse rate around 60, sometimes a little less. I believe he has hypothyroidism and hypometabolism and plan to prescribe either iodine or thyroid. What is the difference in the action of these agents and which would be better to use?

M.D., Pennsylvania

**ANSWER:** *By Consultant in Internal Medicine.* If the diagnosis of hypothyroidism is established, thyroid extract or synthetic thyroxine is indicated rather than iodine. Thyroid extract is believed to act as a catalyst to increase the oxidative processes of the tissue.

Iodine is used for exophthalmic goiter and hyperthyroid states other than adenomatous goiter; the exact action is unknown. Plummer suggested a deficiency of iodine, and the iodine given was the amount necessary for the production of normal thyroid secretion. Marine held that the distention of alveoli with colloid caused a blockage of the pathways whereby the hormone did not enter the blood.

**QUESTION:** A patient had substernal pain for about ninety minutes, together with intermittent pain in both hands. No electrocardiographic changes occurred for one week, at which time a level T wave appeared in the AVL lead. A week later the T wave was slightly depressed, becoming upright in another week. What is the significance of these changes?

M.D., Illinois

**ANSWER:** *By Consultant in Cardiology.* In some cases of suspected myocardial infarction, electrocardiographic changes may not appear for a week or more. The changes noted above, however, suggest that the condition was coronary insufficiency rather than myocardial infarction.



**AGAINST**

**URINARY INFECTION**

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CHIMEDIC

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URISED exerts the prompt antibacterial action of methenamine, salol, methylene blue and benzoic acid along the entire urinary tract—to rapidly reduce irritation, spasm and the pus cell count—encourage healing of the mucosal surfaces.

URISED rapidly relaxes painful smooth muscle spasm and aids in the restoration of normal tone through the dependable parasymphatholytic action of atropine, hyoscyamine and gelsemium.

Literature available on request.

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a wise choice against resistant cocci,

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# *a selective antibiotic*



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against the majority of coccic infections—especially when patients are sensitive to other antibiotics or the cocci are resistant.



## **A DRUG OF CHOICE**

against staphylococci—because of the high incidence of staphylococcic resistance to other antibiotics.



## **A DRUG OF CHOICE**

because it is less likely to alter normal intestinal flora than other oral antibiotics, except penicillin; gastrointestinal disturbances are rare; no serious side effects reported.



## **ADVANTAGEOUS**

because the special acid-resistant coating, developed by Abbott, and Abbott's built-in disintegrator, assure rapid dispersal and absorption in the upper intestinal tract.



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in pharyngitis, tonsillitis, otitis media, sinusitis, bronchitis, pneumonia, scarlet fever, erysipelas, pyoderma, certain cases of osteomyelitis, and other indicated conditions.

**Abbott**

\*Trade mark for ERYTHROMYCIN, ABBOTT

**CRYSTALLINE**

## Forensic Medicine

ARTHUR L. H. STREET, LL.B.

*Prepared especially for  
Modern Medicine*

**PROBLEM:** A surgical sponge was left in an abdominal surgery wound and the patient sued the hospital and the surgeons. Question was raised, for liability purposes, as to whether the nurse who assisted the surgeons was their representative or the agent of the hospital. Was that question one to be properly referred to a jury for decision?

**COURT'S ANSWER:** Yes.

The Florida Supreme Court said that in that state, as in others, the courts recognize that "when one employs a surgeon, enters a hospital, public or charitable, and receives treatment of a nurse furnished by the hospital, but who is under the direct supervision of the surgeon, that said nurse is the agent of the doctor and the hospital is not liable for her negligence while acting under the direction of the doctor. Neither is the hospital responsible for the doctor's negligence."

The trial judge had summarily dismissed the suit regarding the hospital but the Supreme Court ordered it reinstated for determination as to whom the nurse represented when the patient's wound was closed (65 So. 2d 40).

**PROBLEM:** Under a Massachusetts statute, a husband secured a court decree declaring that he was living apart from his wife for justifiable cause. After the death of his wife, was he liable for the expenses of the last illness?

**COURT'S ANSWER:** No.

The Massachusetts Supreme Judicial Court noted that liability does not exist in such circumstances, even in the absence of such a statute. But, as previously decided by the same court, the rule does not apply when the wife leaves her husband for justifiable cause (111 N.E. 2d 797).

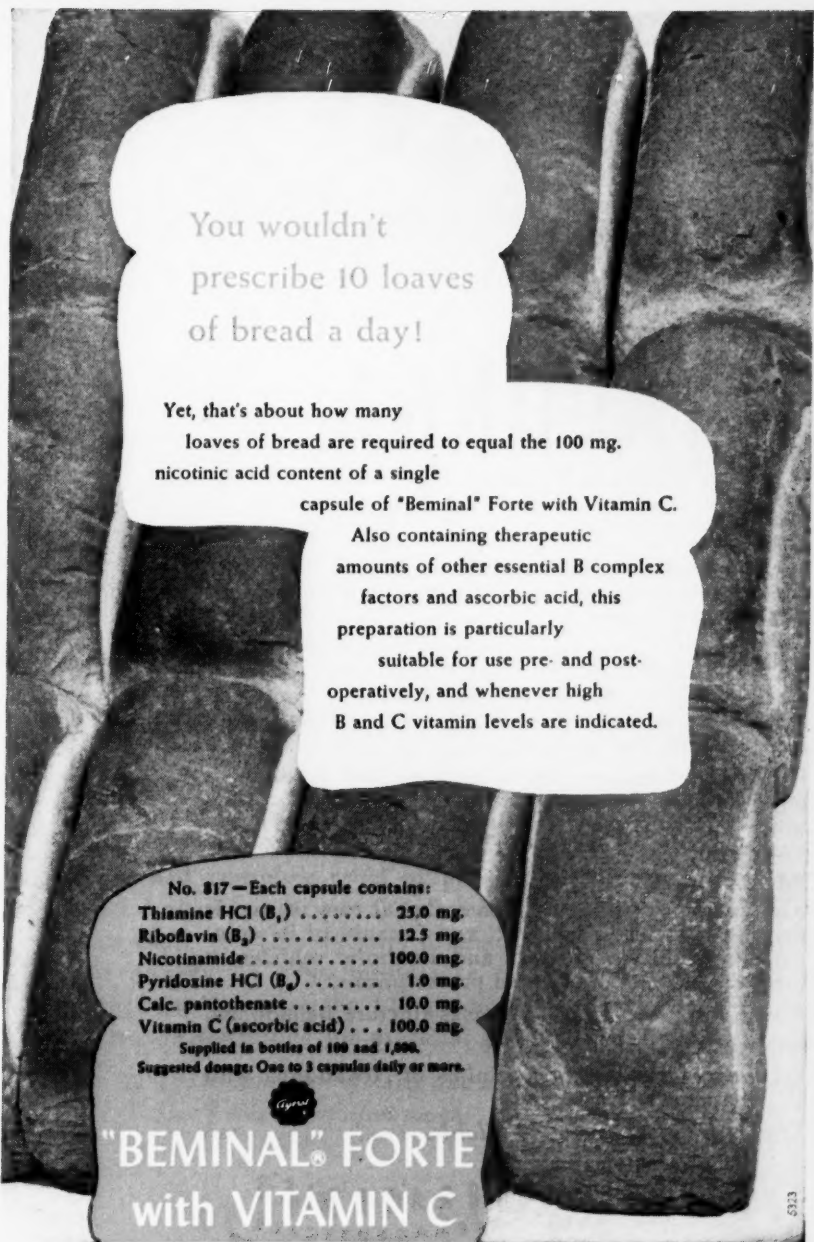
¶ The court was judging cases in which spouses live apart but are not divorced, not cases, such as frequently arise throughout the country, when obligations of the husband for support are fixed or excluded by separation agreement or a decree of legal separation.

Obviously, the subject suggests the importance of a doctor checking with local legal counsel before assuming that he can hold a separated husband liable for services rendered the wife.—A.L.H.S.

**PROBLEM:** A Missouri statute provides that when death results from negligence, the responsible party may be liable for damages not exceeding \$15,000, "with reference to the necessary injury resulting from such death." Could a surviving husband recover, as part of the damages, the amount of medical expense incurred for treatment of his wife's fatal injuries?

**COURT'S ANSWER:** Yes.

It was so decided by the Missouri Supreme Court (254 S.W. 2d 15).



You wouldn't  
prescribe 10 loaves  
of bread a day!

Yet, that's about how many  
loaves of bread are required to equal the 100 mg.  
nicotinic acid content of a single  
capsule of "Beminal" Forte with Vitamin C.

Also containing therapeutic  
amounts of other essential B complex  
factors and ascorbic acid, this  
preparation is particularly  
suitable for use pre- and post-  
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B and C vitamin levels are indicated.

No. 817—Each capsule contains:

Thiamine HCl (B <sub>1</sub> )	25.0 mg.
Riboflavin (B <sub>2</sub> )	12.5 mg.
Nicotinamide	100.0 mg.
Pyridoxine HCl (B <sub>6</sub> )	1.0 mg.
Calc. pantothenate	10.0 mg.
Vitamin C (ascorbic acid)	100.0 mg.

Supplied in bottles of 100 and 1,000.

Suggested dosage: One to 3 capsules daily or more.

  
**"BEMINAL" FORTE**  
with VITAMIN C

Ayerst, McKenna & Harrison Limited, New York, N. Y. • Montreal, Canada

*More  
Effective*

**SPASMOLYSIS**

**NOVADONNA**

(SOLUTION)

**WITH  
LESS  
SIDE  
EFFECTS**

Broad clinical effectiveness in antispasmodic therapy can be obtained without increasing the possibility of disturbing side-effects.

In Novadonna, the full antispasmodic benefit of the truly natural alkaloids of belladonna is made available. These are present in *precise* and *fixed* proportions and are *potentiated* by homatropine methylbromide, which replaces atropine.

By virtue of the amount of homatropine methylbromide used and the exact proportioning of the alkaloids more potent spasmolysis is provided — and at *sub-toxic dosage levels*.

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The flexibility of Novadonna makes it easy to use. It may be prescribed "per se" and because of its compatibility with all aqueous and alcoholic vehicles, it can be used in compounded prescriptions.

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*In the Treatment of*

# NEURITIS

(Sciatic—Intercostal—Facial)

"...patients responded  
with complete relief  
of pain"\*

WITH **PROTAMIDE**



Richard T. Smith, M.D., in a currently published paper, "Treatment of Neuritis with Protamide" reports: 84 patients of 104 had complete relief of pain in sciatic, intercostal and facial neuritis with one daily injection of Protamide for five or ten days. "... 49 were discharged as cured after five days of therapy." No intolerance to Protamide, systemic or local was found in the 125 patients (104 plus 21 controls). Two qualifications for practical application of this study are:

1. *The elimination of cases due to mechanical pressure.*
2. *Early treatment after onset.*

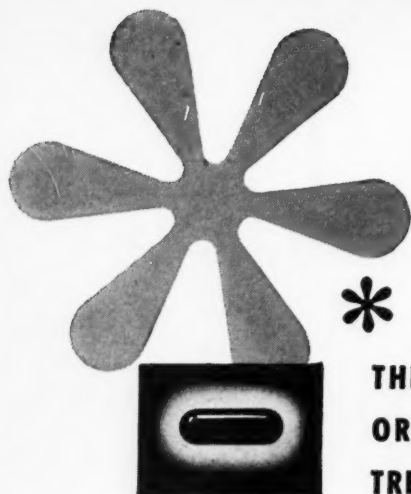
Your prescription  
blank marked  
NEURITIS  
REPRINT  
will bring literature.

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ORAL PREPARATION FOR THE  
TREATMENT OF HYPERTENSION**

Veratrite® brings your hypertensive patients the best therapeutic benefits of Veratrum, since it provides Cryptenamine \* the newly isolated, broader safety-ratio Veratrum alkaloid developed through Irwin, Neisler research.

*Each tabule contains:*

Whole-powdered Veratrum viride (containing Cryptenamine) . .

.....40 C.S.R.† Units

Sodium Nitrite . . 1 grain

Phenobarbital . . . ¼ grain

†Carotid Sinus Reflex

*Supplied: Bottles of 100,  
500, 1000.*

Sustained control of blood pressure, with minimum side reactions and maximum safety, is the significant contribution of Veratrite to the long-term management of hypertension.

# Veratrite

**IRWIN, NEISLER & COMPANY • DECATUR, ILLINOIS**

*Research to Serve Your Practice*

**PROBLEM:** A doctor performed an appendectomy upon an adult single woman, expecting that her father, with whom she lived, would pay the fee. However, he did not secure the father's explicit promise to pay. The doctor billed the daughter, who had been moved to a hospital at the father's request. The father had previously requested that she be treated medically but not surgically. It appeared, however, that the parent's refusal to pay the bill was based largely upon the fact that the doctor also removed an ovarian cyst discovered in operating. Was the father liable for the operating fee?

**COURT'S ANSWER:** Yes.

The court decided that, since the fee was charged to the daughter, the doctor apparently did not extend credit to the father. However, this evidence was not conclusive. The circumstances warranted an inference that the father had not acted as agent for his daughter, as he claimed. It would have been unethical not to have removed the cyst.

The case came within the rule recognized by the courts of many states, that "he who orders a physician to come to his home to treat a member of his family becomes responsible for the payment of the physician's services unless he makes known . . . that he disavows responsibility" (234 N.W. 739).

**PROBLEM:** A death certificate stated that death was a result of cancer. However, the beneficiary of a health and accident policy sought to recover benefits for death by accidental means. Was the certificate conclusive in the absence of contradicting evidence?

**COURT'S ANSWER:** Yes.

This case was decided by the Texas Court of Civil Appeals, Dallas (257 S. W. 2d 338).

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**'TRICOLOID'** brand  
TRICYCLAMOL

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relief, in  
insomnia,  
few hours,  
the greatest  
associated  
people sleep

TRICOLOID  
relief, in  
insomnia,  
few hours,  
the greatest  
associated  
people sleep



## SUMMARY AND CONCLUSIONS

One hundred forty-seven patients with superficial infections of the skin were treated with "polycin," an ointment containing a mixture of polymyxin B sulfate and bacitracin.

Only three patients in the present series failed to respond to treatment. Bacteriological studies showed that "polycin" was especially effective in controlling lesions harboring both Gram-positive and Gram-negative organisms. The low rate of sensitization so far observed makes the ointment an ideal preparation for topical use.

Although 75 patients were treated for bacterial infections superimposed on other skin diseases, in no instance did "polycin" excite or aggravate the primary condition.

## THE FIRST POLYMYXIN- BACITRACIN PREPARATION FOR TOPICAL INFECTIONS

### Polycin® Ointment

The effectiveness of polymyxin and bacitracin combined for topical use was clinically established with Polycin Ointment. Now, for added flexibility of treatment measures, this potent antibiotic combination is available in two new, convenient forms...Polycin Liquid and Polycin Soluble Tablets.

PITMAN-MOORE COMPANY

Gastineau, F. M., and Florestano, H. J.: Clinical Experience with "Polycin," A Polymyxin-Bacitracin Ointment. *Arch. Dermatol. & Syphilol.* 66:70 (July) 1952.

### Polycin Liquid

For dropper administration in skin or mucous membrane infections, especially when caused by mixed organisms or *Ps. aeruginosa*. Special base permits exceptional diffusion of antibiotics.

### Polycin Soluble Tablets

For extemporaneous antibiotic concentrations, used in wet dressings, sprays, irrigations. Tablets dissolve readily in water or normal saline.

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**SUPPOSITORIES**  
with **cod liver oil**

are safe, conservative therapy  
in **hemorrhoids**

*more effective...* • because they provide healing crude Norwegian  
cod liver oil (rich in vitamins A and D and  
unsaturated fatty acids, in proper ratio  
for maximum efficacy).

*more comforting...* • emollient, protective, lubricant to relieve  
pain, itching and irritation rapidly... to  
minimize bleeding and reduce congestion.

*safe, conservative.....* contain no styptics, narcotics  
or local anesthetics, so  
they will not mask  
serious rectal disease.  
Easy to insert and  
retain.



Composition of Desitin Supposi-  
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oil, lanolin, zinc oxide, bismuth  
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butter base. Boxes of 12 foil  
wrapped suppositories.

for **samples**, please write • • • • **DESITIN** CHEMICAL COMPANY •

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## FORENSIC MEDICINE

**PROBLEM:** The jury in a malpractice suit could have concluded from the medical testimony presented that a patient's right arm became distorted and useless because the doctor had removed splints too soon after treating a fracture. Did the trial judge improperly decide that the patient could not collect damages because the patient had rejected the doctor's offer to bear the expense of rebreaking the arm and resetting it?

**COURT'S ANSWER:** Yes.

The Kentucky Court of Appeals, in ordering a new trial, stated that submission to treatment proposed by the doctor would not have defeated the patient's right to collect damages if the original treatment was negligent. But if a jury should find that refusal to have

the fracture reset was unreasonable, he could not collect damages for so much of his permanent injury as was enhanced by such refusal (5 S.W. 2d 1044).

**PROBLEM:** The principal point of dispute in a workmen's compensation proceeding was whether claimant had sustained a disabling injury to his back or knee. Was the opinion of an orthopedist of greater weight than a general practitioner's opinion to the contrary, the specialist having made a complete examination upon the recommendation of the general practitioner?

**COURT'S ANSWER:** Yes.

So decided the Louisiana Court of Appeal, Second Circuit (62 So. 2d 676).



*For the Morning Call*

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CONSTIPATION CORRECTIVE  
Lubricoid Action Without Oil

ESPECIALLY USEFUL IN

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# varicose ulcer



**FEBRUARY 11**  
2.1 x 1.3 cm.  
varicose ulcer,  
unresponsive to  
previous therapy.



**FEBRUARY 19**  
Epithelial  
ingrowth from  
margins after  
8 days' therapy  
with MY-B-DEN,  
Sustained-Action,  
20 mg.



**MARCH 19**  
Ulcer completely  
healed.  
Patient received  
22 injections  
of MY-B-DEN,  
Sustained-Action,  
20 mg.  
(1 cc. I. M.)

*clinical demonstration  
of response to*

## MY-B-DEN®

(adenosine-5-monophosphate)

**NONTOXIC, SYSTEMIC MUSCLE  
ADENYLIC ACID THERAPY**

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of chronic venous insufficiency  
respond dramatically to MY-B-DEN.  
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burning are quickly relieved and  
"the ulcer proceeds to heal."

The benefits of supportive measures  
are enhanced, and when surgery  
is indicated MY-B-DEN is a  
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*Administration:* 1 cc. injected intramuscularly  
3 times weekly. For severe cases  
dosage treatment may require 4 to 6 weeks.

*Supplied:* MY-B-DEN Sustained-Action in gelatin  
solution: 10 cc. vials in two strengths,  
20 mg. per cc. and 100 mg. per cc.  
adenosine-5-monophosphate as the sodium salt.  
(Also available in Aqueous Solution  
and Sublingual Tablets.)

1. Rottino, A.; Boller, R., and Pratt, G. H.:  
*Angiology* 1:194, 1950.

2. Boller, R.; Rottino, A., and Pratt, G. H.:  
*Angiology* 3:260, 1952.

*"Pioneers in  
Adenyllic  
Acid Therapy"*

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**ERNST BISCHOFF COMPANY, INC.**  
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### *Relaxamine*

gives you a new, unique formula with  
a complementary combination that

- 1 Relaxes tense muscles with  
Mephenesin (300 mg.)
- 2 Controls G-I spasms with  
Homatropine Methyl Bromide (2 mg.)
- 3 Calms mental tension with  
Phenobarbital (1/6 gr.)
- 4 Elevates the mood with  
Dextro Amphetamine Sulfate (2 mg.)
- 5 Avoids drowsiness and toxicity  
by its small complementary doses
- 6 Permits long-term daytime control  
because effects are non-cumulative

1/2 to 2 tablets t.i.d. after  
meals. Also at bedtime if  
necessary.

Bottles of 50 and 500  
scored tablets.

Relaxamine—Trade Mark

*Write for Complimentary Samples and Literature*

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**PROBLEM:** A North Carolina statute provides that, on complaint by the state medical board, the attorney general shall investigate charges of unlicensed medical practice and, on finding the charges to be true, direct the district attorney to prosecute. Could the district attorney prosecute without action by the board or the attorney general?

**COURT'S ANSWER:** Yes.

The North Carolina Supreme Court noted that the state constitution makes it the duty of a district attorney to prosecute for crime and that the attorney general's duty in such matters is purely advisory in nature (75 S. E. 2d 654).

**PROBLEM:** Was a damage award of \$10,000 for negligent roentgen treatment in removing a plantar wart excessive, when amputation of 2 toes was required and skin, subcutaneous tissue, and foot muscle were involved?

**COURT'S ANSWER:** No.

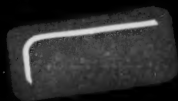
So decided the Illinois Appellate Court, Second District (112 N.E. 2d 175).

**PROBLEM:** In the trial of a personal injury suit, a medical expert testified that the type of nerve injury found in the section of the fourth lumbar segment of the patient's spinal cord, from which the nerves going down into his leg originated, might "be due to some displacement of the spine" not detectable by roentgen film or to a "pinched nerve." Was the testimony objectionable as attributing the injury to the accident for which the damages were claimed?

**COURT'S ANSWER:** No.

The Missouri Supreme Court said that it was clear that the testimony related only to pathologic changes resulting in the injury the doctor found (258 S.W. 2d 643).

## *White's* sulfathiazole gum



brings a high concentration of sulfathiazole directly to the site of oropharyngeal infection — producing the most prolonged, effective local antibacterial levels with virtually no systemic absorption.

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Prescribe A Complete Hematinic,*

### Each Capsule Contains:

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VITAMIN B12 \_\_\_\_\_ 5.0 mcg.  
FOLIC ACID \_\_\_\_\_ 0.33 mg.  
ASCORBIC ACID \_\_\_\_\_ 50.0 mg.  
VITAMIN A \_\_\_\_\_ 5,000 U.S.P. units  
VITAMIN D \_\_\_\_\_ 500 U.S.P. units  
THIAMINE HYDROCHLORIDE \_\_\_\_\_ 2 mg.  
RIBOFLAVIN \_\_\_\_\_ 2 mg.  
PYRIDOXINE HYDROCHLORIDE \_\_\_\_\_ 0.1 mg.  
NIACINAMIDE \_\_\_\_\_ 10 mg.

CALCIUM PANTOTHENATE \_\_\_\_\_ 0.33 mg.  
COBALT \_\_\_\_\_ 0.1 mg.  
COPPER \_\_\_\_\_ 1 mg.  
MOLYBDENUM \_\_\_\_\_ 0.2 mg.  
CALCIUM \_\_\_\_\_ 37.4 mg.  
IODINE \_\_\_\_\_ 0.05 mg.  
MANGANESE \_\_\_\_\_ 0.033 mg.  
MAGNESIUM \_\_\_\_\_ 2 mg.  
PHOSPHORUS \_\_\_\_\_ 29.0 mg.  
POTASSIUM \_\_\_\_\_ 1.7 mg.  
ZINC \_\_\_\_\_ 0.4 mg.

With other B-Complex Factors from Liver

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# A New, Mild, Aqueous Nose Drop That Clings to Nasal Membranes

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MOST AQUEOUS NOSE drops have long presented a problem—how to prevent them running out of the nose or rushing down the throat.

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VICKS  
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**ANTISPASMODIC, MILD SEDATIVE**

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**Each Tablet Contains:**

Sodium Phenobarbital . . . . .  $\frac{1}{4}$  gr.  
(Barbituric acid derivative)

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BOTTLES OF 100  
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ALSO AVAILABLE  
IN LIQUID FORM.

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**IN HYPERTENSIVE STATES**

An effective vasodilator and mild sedative combining theobromine and phenobarbital.

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Theobromine . . . . . 5 gr.

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BOTTLES OF 100  
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**FOR IRON DEFICIENCY, ANEMIAS**

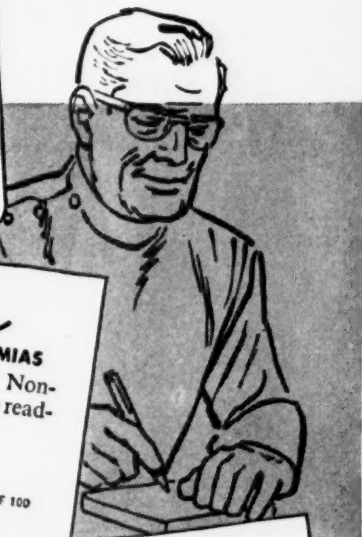
An easy-to-take therapeutic. Non-irritating, better tolerated, more readily absorbed.

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(5 gr. equivalent to 39 mg. ferrous iron)

Thiamin hydrochloride (B) . . . 5 mg.

BOTTLES OF 100



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**A SUPERIOR SALICYLATE THERAPY**

Indicated in rheumatic fever, rheumatoid arthritis, neuralgia, myalgias, arthralgia, fibrositis, gout, osteoarthritis.

**EACH TABLET CONTAINS:**

Sodium salicylate . . . . . 5 gr. BOTTLES OF  
Vitamin C . . . . . 10 mg. 100 AND 500  
Para-Aminobenzoic Acid . . . . . 5 gr.

**Advertised  
only to the medical  
profession.**

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**THERAPEUTICALLY EFFECTIVE—  
COSMETICALLY TINTED**  
*for follicular obstruction:*

**LOTION** — *Regular* (full strength)  
for severe cases and extremely oily skin.

*Modified* (half strength) for sensitive  
skins and to determine tolerance  
in new cases.

**SUPPLIED:** 2 shades each strength,  
blonde and brunette, bottles 4 fl. oz.

**OINTMENT** — for daytime  
masking of lesions. Washable,  
penetrates rapidly.

**SUPPLIED:** 2 shades, blonde and  
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**SOAP** with Salicylic Acid.  
**SUPPLIED:** cake 4 oz.

*for associated seborrhea of scalp:*

—**RESORCITATE** (Almay Lotion  
Salicylic Resorcinol  
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*Plain*, for oily hair . . .

*With oil*, for dry hair.

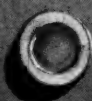
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The new improved Franklin Bilirubin Test is **fast** (test in 15 seconds)—**easy** (no equipment needed), and **dependable** (no false positives)...reveals acute infectious hepatitis before appearance of clinical jaundice.

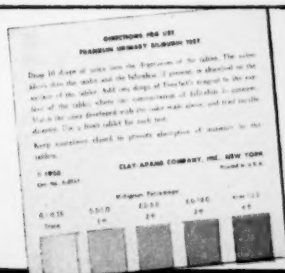
### 3 quick, easy steps:



1. Add 10 drops of urine.



2. Add 2 drops of Fouchet's Reagent.



3. Match with color scale—read results directly.

**Versatile**—Use it anywhere, without special equipment...in doctor's office...in the laboratory...in patient's home...practical for mass screening.

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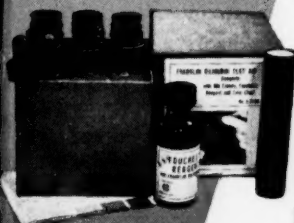
**Reliable**—No false positives. Results not obscured by presence of other pigments—no reaction to other urine constituents.

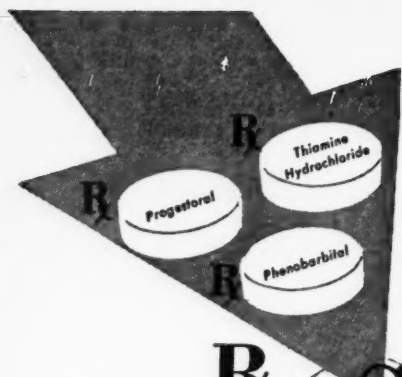
**A-2760 Franklin Bilirubin Test Kit Complete, Ready to Use.** Includes 100 Tablets, Fouchet's reagent, Color Chart and Directions . . . each \$6.75

For laboratory use, tablets are available in quantity at quantity prices.

Order from your Surgical Supply Dealer.

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*now available in a  
single tablet...an effective  
triple prescription for the control of  
premenstrual tension and dysmenorrhea*

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Each Surdon tablet contains 5 mg. of Progestoral® (ethisterone), the orally effective form of the corpus luteum hormone, for its well-known uterine relaxant and hormonal balancing effect.

## THIAMINE HYDROCHLORIDE

In each Surdon tablet there are 15 mg. of thiamine hydrochloride (vitamin B<sub>1</sub>)—which aids the liver to inactivate estrogen. Thiamine also provides a boost often needed by these patients.

## PHENOBARBITAL

Surdon tablets also contain 15 mg. of phenobarbital (approx. ¼ gr.) to allay apprehension, tension and pain—symptoms from which these patients most frequently seek relief.

One or two Surdon tablets per day during the last seven to ten days of the menstrual cycle will usually suffice. Surdon tablets are packaged in boxes of 30.

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ORANGE, N. J.

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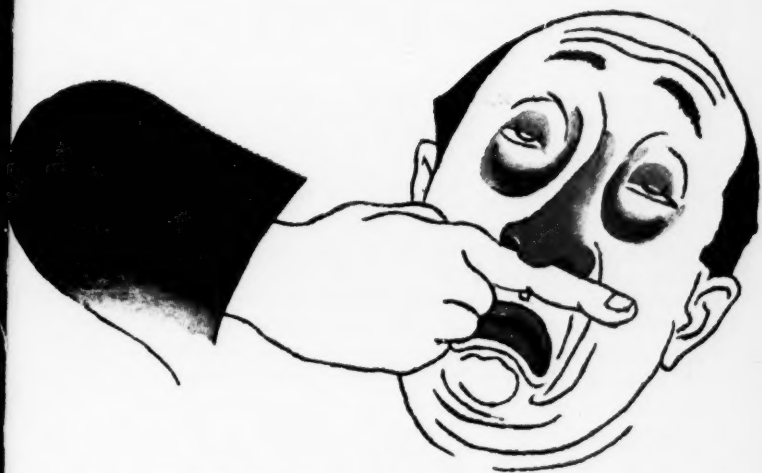
Send me trial supply of Surdon Tablets

Dr. \_\_\_\_\_

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T. M.—Surdon



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**CORICIDIN**  
*for symptomatic relief*  
*in the common cold*

CORICIDIN produces quick suppression of cold symptoms because it contains chlorprophenpyridamine maleate, the most potent antihistamine available. Best results are obtained when CORICIDIN is taken early, but even in later stages considerable comfort is afforded.

**CORICIDIN** *tablets*

Each CORICIDIN® Tablet contains 2 mg. chlorprophenpyridamine maleate and the standard APC combination.

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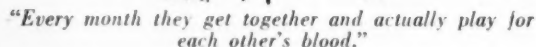


## Appropriations for State Medical Programs Cut

less money to spend, or to give to the states, than last year. This conforms with the Eisenhower administration's determination to force states to carry more of the load in health and other activities of a purely domestic or local nature.

For example, the federal government's program of helping states to find and treat tuberculosis patients is being operated on \$6 million during the current fiscal year. This is almost \$2.5 million less than was available for this work in the last fiscal year. Sen. Langer unsuccessful-

On venereal disease control, Congress was still more insistent that states take over the job. Total appropriation of last year was reduced not quite 50%—from \$9.7 million to \$5 million. Concerning this program, the House Appropriations Committee said, "The point has been reached where the states and communities



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\*Glazebrook, A.J., Brit. M.J.,

2:1328, Dec. 20, 1952

## WASHINGTON LETTER

can take care of the problem with a minimum of assistance from the federal government."

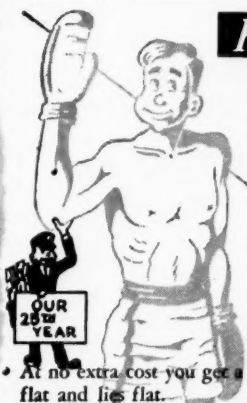
Funds for communicable diseases, other than venereal diseases and tuberculosis, fared a little better. A total of \$5 million was appropriated, or a cut of less than \$1 million from this year's appropriations.

The House Appropriations Committee said flatly that general public health work "is a state and local responsibility." However, Congress was not ready to shift the responsibility completely and allowed \$13,250,000 for this work, or a reduction of about \$3 million from this year's total. The money is to help states work on diseases other

than those covered by specific grants.

Although Congress is keeping an eye on the dollar, leadership in research is being maintained by granting substantial increases to the various National Health Institutes. Specific warnings were issued, however, that most of this money had to go directly to research and was not to be dissipated among the states in grants for training, case-finding, and so on.

The Cancer Institute, for example, has just over \$20 million for this year, in contrast to \$17.5 million last year. The Institute might have fared much better had Sen. Taft's fatal cancer developed before votes were taken. Already bills



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## WASHINGTON LETTER

have been introduced for consideration in January, to set up a special "Taft fund" for cancer research. Even if this legislation is not carried through, the Cancer Institute need have no worries about appropriations for legislation for the next several years.

Mental health also was voted a substantial increase of \$12 million instead of last year's \$10.8 million. The National Heart Institute was upped from \$11.7 million to \$15 million. The greatest proportionate increase was voted to the Institute of Neurology and Blindness. Last year just under \$2 million was granted for research in these conditions. This year \$4.5 million was appropriated.

A helpful increase also was voted to the Institute of Arthritis and Metabolic Diseases—from \$4.5 million to \$7 million.

Congress has repeatedly made clear in committee reports that large sums would be spent for centralized research that states cannot handle efficiently. However, no money will be given to a state for services that should be considered a state responsibility. The argument is this: Why tax states, route the money through Washington, then return it to the states to do work that the states should be doing anyway?

Even the highly regarded Hill-Burton hospital construction program almost fell a victim to this



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Vainder, Milton:  
Indus. Med. & Surg.  
22:183 (Apr.) 1953



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1. Manheim, S. D.: New York State J. Med. 51:2759 (Dec.) 1951.

2. Tice, L. F.: Philadelphia Med. 45:1135 (Mar. 25) 1950.

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## WASHINGTON LETTER

philosophy. The Truman budget has asked \$75 million for these grants. The Eisenhower budget cut this to \$60 million. The House Appropriations Committee sliced off another \$10 million. The House total might have been the final figure, except that a few states faced drastic cuts because of long-term programs for which federal funds were anticipated. These states put the pressure on their senators. The result was a Senate recommendation for \$75 million and a final figure of \$65 million.

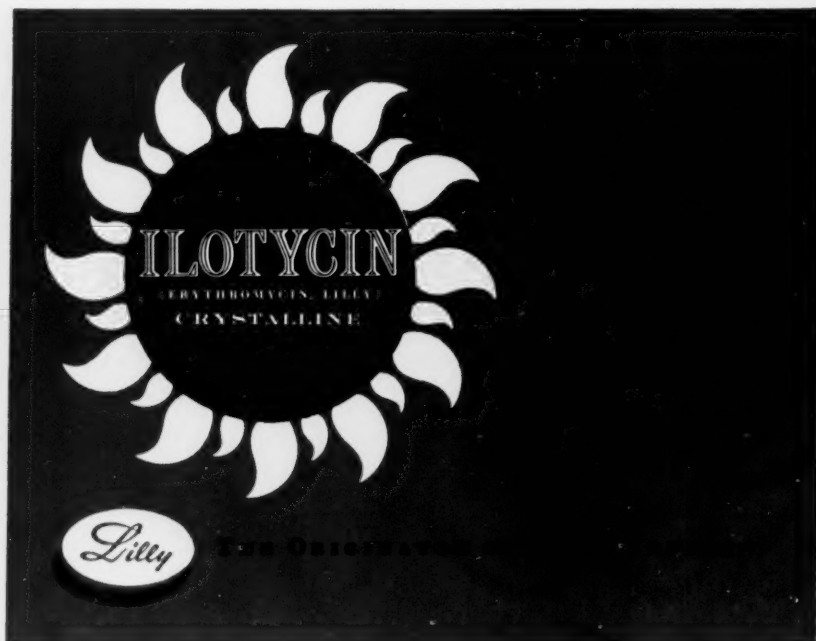
### Medical Legislation Changes

Although federal medical legislation was not prominent in the first session of Congress, several

extremely important changes were made. Most outstanding, probably, was the creation of a Department of Health, Education and Welfare. President Truman repeatedly had proposed such a reorganization, but Congress always refused him, largely because of reluctance to make former Federal Security Administrator, Oscar Ewing, a cabinet member.

Another important change was reorganization of the Defense Department which moved a civilian physician—currently Dr. Melvin Casberg—into the new post of Assistant Secretary for Health and Medical Matters. American Medical Association and several other

*(Continued on page 66)*



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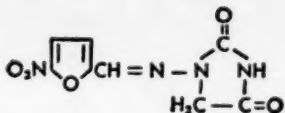
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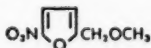


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## WASHINGTON LETTER

professional groups had strongly urged this change, to give the civilian medical profession a stronger voice in military medical matters.

Little noticed was the inquiring eye focused by this Congress on abuses that have developed in Veterans Administration medical care program. Several hearings were conducted at which the shady areas were exposed to much helpful sunlight. The only specific change, however, was a restriction on dental care of veterans, written into a VA appropriations bill.

### Washington Notes

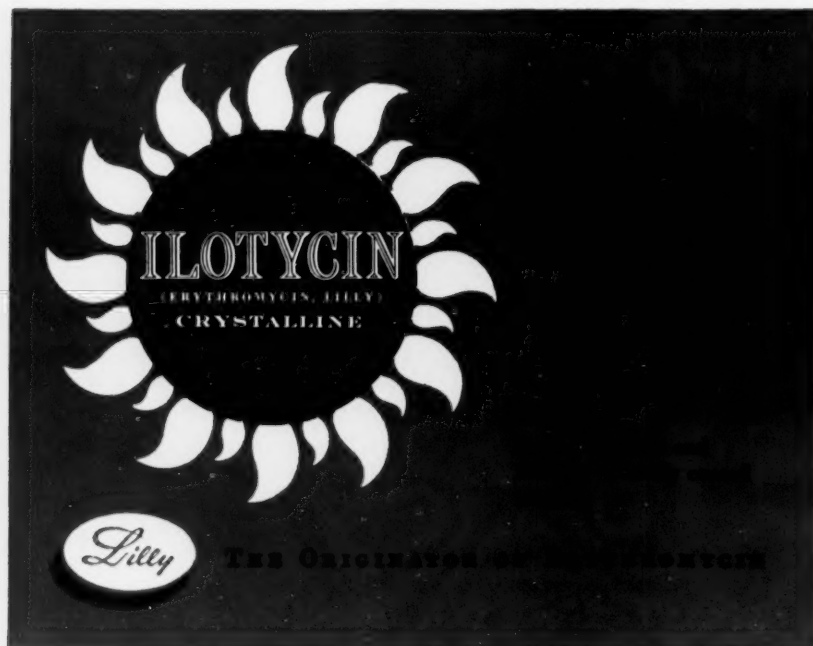
¶ One of the highly controversial subjects to come up in the next Congress will be legislation for ex-

tension of Social Security to about 10 million persons, including self-employed physicians. The administration already knows that most doctors oppose the idea, but will attempt to have the bill enacted.

¶ New legislation places chemically synthesized morphine, cocaine, and other narcotics under jurisdiction of the federal narcotics law. Another new law extends service connection to all types of tuberculosis under the VA program.

¶ Sen. Hill (D., Ala.) has promised to renew his fight next session to earmark federal royalties from tableland oil for educational purposes. Some of the money should go for medical and dental schools.

(Continued on page 71)

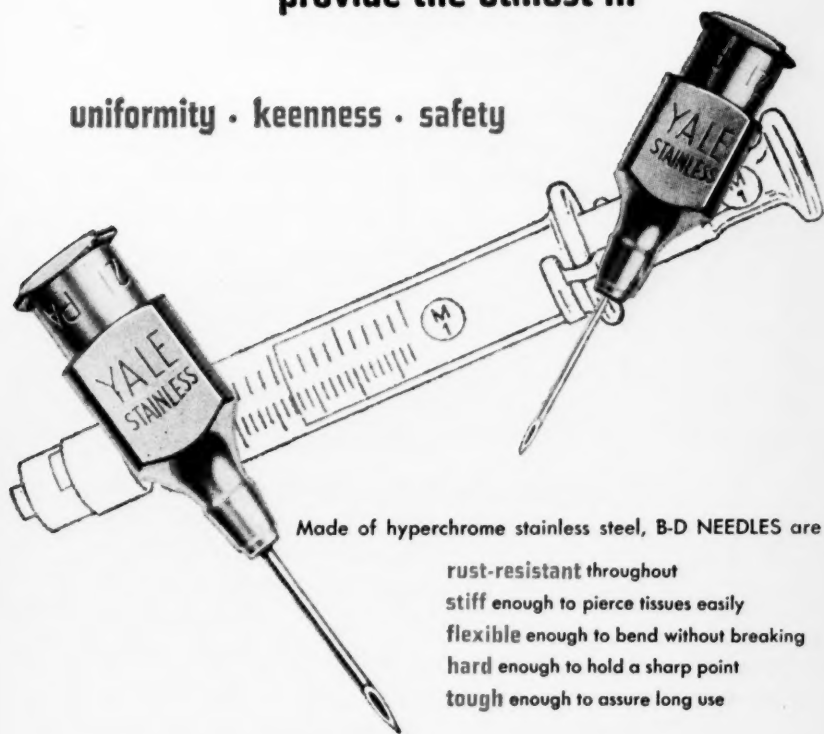


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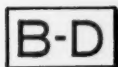


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1. Tisdall, F. F., and Jolliffe, N., in *Clinical Nutrition*, New York, P. B. Hoeber, 1950, c. 23, p. 590. 2. Sealock, R. R., and Goodland, R. L.: *Science* 114:645 (Dec. 14) 1951.



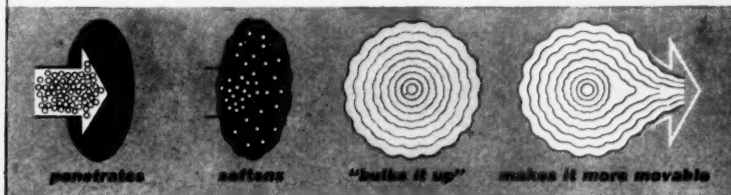
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## WASHINGTON LETTER

¶ Sen. Hunt (D., Wyo.) has made the first important step in his long-cherished plan for western states' medical and dental schools, supported jointly and drawing students from all participating states. Congress, in the closing hours, gave consent to the states. Alaska and 11 western states are involved.

¶ Legislation for transferring Indian Service hospitals and medical care from Interior Department to U. S. Public Health Service will be prominent in the next session. This bill lost out in the last session's rush for adjournment.

¶ Another House committee is investigating tax-exempt foundations, many of which contribute heavily to medical education and research.

The last investigation started out critical of the organizations but concluded with a friendly and encouraging report. The new committee is under chairmanship of Rep. Carroll Reece (R., Tenn.).

¶ The new special assistant to Secretary Hobby, Dr. Chester Scott Keefer of Boston, is attempting to do, on a part-time basis, a job that would keep most people busy eighteen hours a day. He hopes to continue with his work at Boston University Medical School and Massachusetts Memorial Hospital. For Mrs. Hobby, he will have to review all medical legislation, represent her at medical meetings, and maintain liaison with professional associations.



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# MODERN MEDICINE

THE JOURNAL OF DIAGNOSIS AND TREATMENT

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## THE EDITOR'S PAGE

by WALTER C. ALVAREZ, *Editor-in-Chief*

### Need for Reporting Failures and Mishaps

Often after a method of treatment has been proposed and several men have written enthusiastic reports about it, suddenly no more is heard. The treatment is given up, but no one says why. This phenomenon always interests me and I suspect that what has happened is similar to what happened to me thirty-five years ago when I optimistically tried the technic of making roentgenograms of the abdominal organs after filling the peritoneal cavity with gas.

The films were beautiful; the only trouble was that the patients suffered pain so severe that it could not be relieved with morphine. I was just about ready to quit using the technic. Then one day in my office a minister of 55 when injected with the gas went into shock; he stopped breathing, turned black, and all but died. So I quit, and now I am ashamed to say that, like the other men who had been using the technic, I did not take the time to report why I quit. Later I tried alcohol injections for relief of pain and had so many unfortunate experiences that I stopped those too. Still later I ordered sympathectomy for migraine, and soon I had enough of that.

What caused me to write this editorial was a chat I had the other evening with a fine, able surgeon who told me about a recent experience. He had injected the stellate ganglion to help a woman who had just suffered a stroke. The injection was made without mishap. A few days later the woman went steadily downhill and died, as many patients with a stroke are bound to do.

The family then accused the doctor of having killed her and

## EDITORIALS

stuck to this view in spite of all the physician could say. Today this man could not be paid to make another stellate block to cure a stroke; he has had enough. Hereafter if he ever uses a palliative procedure it is going to be a harmless one, one not likely to make the patient's family angry or inclined to file a damage suit.

My thesis is that it would be a wonderful thing in medicine if every journal had a small section for short, pithy, absolutely frank reports by men who had had enough of some procedure and never intended to use it again.

### Iatrogenic Salt Depletion

In the July 1953 number of *Annals of Internal Medicine* there is a fine editorial on the dangers of reducing a patient's supply of sodium too drastically. As the writer says, efforts at salt depletion may be safe enough and useful in some cases but dangerous in others. Serious salt depletion is more likely to occur in elderly and arteriosclerotic persons and those with impaired kidney function.

The syndrome to be watched for consists of weakness, drowsiness, muscular cramps, thirst unrelieved by water, anorexia, nausea, occasional vomiting, a decrease in urinary output, refractoriness to diuretics, and sometimes a gain in weight due to edema. The patient may also be restless and mentally confused, have a fall in blood pressure, increase in pulse rate, and, finally, coma and shock.

This syndrome can sometimes be overcome dramatically by giving a sodium salt without much water. The editorial writer concludes, "As the anti-sodium campaign increases in tempo and widens its scope, we must be watchful for signs and symptoms of salt depletion. Low sodium foods are becoming more available; ingenious low sodium diets are being devised; the mercurials are enjoying increasing popularity, and the exchange resins have entered the lists. Meanwhile paracenteses, suction, fistulas, vomiting, diarrhea and heat waves all continue to exert their desalting influences on our patients' internal environment. There is therefore certain to be an increasing number of induced salt depletion syndromes, and every clinician should be well versed in their recognition and treatment, but most of all in their prevention."

*Roentgenographic studies are important in the differential diagnosis of pulmonary scleroderma.*

## Pulmonary Scleroderma

WADE H. SHUFORD, M.D., WILLIAM B. SEAMAN, M.D.,  
AND ALFRED GOLDMAN, M.D.

*Washington University, St. Louis*

WITH scleroderma, which is a systemic disease, pulmonary involvement may precede cutaneous manifestations. The roentgen appearance is distinctive, consisting of a diffuse linear infiltration most noticeable in the lower half of the lung fields.

Among 37 patients with scleroderma, Wade H. Shuford, M.D., William B. Seaman, M.D., and Alfred Goldman, M.D., found 5 with abnormal chest roentgenograms, all showing the typical reticulated infiltration.

Frequently patients are treated for tuberculosis for long periods before the true diagnosis becomes evident.

No correlation exists between the severity of the skin changes and the degree of pulmonary or cardiac involvement. Slight dysphagia is usually noted, with impairment of peristaltic activity in the distal half of the esophagus, but without stricture.

Cor pulmonale is rare although left ventricular enlargement may occur, presumably from sclerodermatous involvement of the heart.

The 3 principal aspects of the pathologic process are [1] degenerative or destructive alterations—fibrinoid necrosis, [2] proliferative

changes resulting in masses of dense connective tissue, and [3] inflammatory reaction to the primary connective tissue injury. The most constant lesions are proliferative, producing dense collagenous tissue with little or no inflammatory reaction, with or without fibrinoid necrosis.

Oxygen transport is impeded in the lungs. The arterial oxygen saturation is normal or slightly reduced at rest but is greatly decreased after exercise. Pulmonary hypertension may result. The patients frequently die of pulmonary insufficiency before chronic cor pulmonale has a chance to develop.

A second type of lung change consists of subpleural cyst formation, probably caused by the dissolution of alveolar walls, obstructive emphysema, or a combination of both.

For roentgenologic consideration, the most difficult diseases to differentiate are sarcoid, lymphangitic carcinomatosis of the lung, pulmonary congestion, and pulmonary fibrosis from other causes.

*Sarcoidosis* is usually associated with a bilateral hilar adenopathy, which is rare with scleroderma. In general, diffuse pulmonary fibrosis

Pulmonary manifestations of scleroderma. *Arch. Int. Med.* 92:85-97, 1953.

## MEDICINE

tends to be more linear and discrete than the fuzzy vascular markings seen with *congestive failure*.

The pulmonary manifestations of *disseminated lupus erythematosus* usually consist only of a pleural effusion.

The lungs are involved in one-fourth of all cases of *polyarteritis nodosa*, the roentgen appearance varying from no abnormality to a diffuse miliary and nodular infiltration. The typical roentgenographic feature of *polyarteritis nodosa* is continual change, and serial roentgenograms will disclose lesions progressing and regressing, new lesions appearing, and others healing.

The chest roentgenogram with *rheumatic pneumonia* shows vascular congestion or pulmonary edema,

totally dissimilar from the changes seen with scleroderma.

*Acute diffuse interstitial fibrosis* runs a rapid course, terminating in death in from three days to several months.

The *pneumonoconioses* typically produce a nodular, not a thin linear type of fibrosis, and predominating in the upper outer portions of the lung fields rather than in the bases.

Emphysema ordinarily does not appear with scleroderma, a circumstance which may be useful in differential diagnosis.

The diagnosis of scleroderma may be furthered by roentgen examinations showing the characteristic changes in the teeth and bones, soft tissue calcification, and esophageal changes.

¶ ESSENTIAL HYPERTENSION in patients not benefited by, or intolerant to hexamethonium, or hexamethonium combined with Apresoline, may be treated effectively with Dibenzyliline. This drug, N-phenoxyisopropyl-N-benzyl- $\beta$ -chlorethylamine, is an orally active adrenergic blocking agent. Although chemically related to the nitrogen mustards, no toxic effects on the hematopoietic system have been observed. Sam I. Miller, M.D., Ralph V. Ford, M.D., and John H. Moyer, M.D., of Baylor University, Houston, establish the individual patient's dose by increasing dosage until a good hypotensive response or toxic manifestation occurs. The usual amount for responsive patients with diastolic pressures over 140 is about 138 mg. of Dibenzyliline four times daily, with meals and at bedtime; with pressures under 140, the total daily dosage is approximately 127 mg. Hypotensive action is greatest about two hours after administration and lasts twenty-four to thirty-six hours. After blockade is established, sympathomimetic drugs are ineffective in combating overdose, the only effective measure being to place the patient in a head-down position. Dibenzyliline is not recommended for patients with coronary insufficiency or heart failure, because of the reflex tachycardia produced. About 50% of patients not helped by Dibenzyliline benefit if Apresoline is added to the therapy.

*New England J. Med.* 248:576-582, 1953.

*Supplementary fat preparations  
are of special value in permitting adequate  
protein utilization.*

## Use of Oral Fat Preparations

ARTHUR GROLLMAN, M.D.  
*University of Texas, Dallas*

AN adequate caloric intake is essential during disease. When a patient is unable to consume foods of the proper nutritive value, a high caloric intake may be attained with small bulk by means of a fat-carbohydrate emulsion.

When fat is added to a diet containing only marginal quantities of protein, utilization of the latter is increased, explains Arthur Grollman, M.D. Fat has a high caloric value, 9.3 calories per gram. A combination of fat and carbohydrate furnishes a large amount of readily assimilable calories and spares the body protein catabolism. Moreover, nitrogen and potassium deficits from inadequate caloric intake can be remedied by supplementary fat.

The commercially available fat-carbohydrate emulsions Lipomul-Oral and Ediol contain 40 and 50% vegetable oil—peanut and coconut—and 10% glucose in water together with an emulsifying agent, an antioxidant, and a preservative. These are assimilated and well tolerated even in relatively high doses.

The preparations may be given undiluted in doses varying from 15 to 120 cc. at intervals of several hours or by drip through a nasal

tube, if necessary. The emulsions are best administered mixed with water, milk, or fruit juices when used with a regular diet.

Fat-carbohydrate emulsions are valuable in the management of patients with acute renal failure. The emulsions are free of protein and salts and provide sufficient caloric intake to reduce the endogenous body protein catabolism. Approximately 250 cc. of the emulsion furnishes 1,000 calories. This, supplemented by sufficient glucose in water, orally or intravenously, keeps a patient with complete anuria in good condition with a slowly rising nonprotein nitrogen blood level for ten to thirty days.

Fat emulsions can supplement the diet of surgical patients with obstructing lesions of the upper gastrointestinal tract who are taking only liquids. Large amounts cause undesirable side effects such as nausea, vomiting, diarrhea, and constipation, but these are usually slight and transitory and do not require cessation of therapy. Fat-carbohydrate emulsions must not be given to patients with biliary tract calculi or pyloric obstruction with retention.

The emulsions are effective as supplementary feedings for under-

*J. Clin. Nutrition 1:302-305, 1953.*

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weight or malnourished patients, especially before operations. From 30 to 120 cc. may be diluted in a glass of water or milk and taken between meals or at bedtime.

Many patients with febrile illnesses, hyperthyroidism, burns, or fractures have an increased rate of

protein catabolism, making supplemental feeding with emulsions desirable. The emulsions are also of special value in nutritional therapy for tuberculosis or for poliomyelitis and to offset the catabolic effects of cortisone and corticotropin for patients receiving steroid therapy.

### Steroid Therapy of Allergic Reactions

LAWRENCE E. SHULMAN, M.D., EDYTH H. SCHOENRICH, M.D.,  
AND A. MCGEE HARVEY, M.D.

ORAL cortisone usually produces prompt relief from the symptoms of drug hypersensitivity reaction of the serum sickness type, especially when epinephrine and antihistamines are not rapidly effective. Intramuscular or intravenous ACTH may also be satisfactory but entails problems of administration.

Reactions from penicillin may occur from one to fourteen days after start of administration. Fever and extensive giant urticaria with erythema and angioneurotic edema usually appear. Pruritis, conjunctivitis, lymphadenopathy, arthritis, nausea and vomiting, dyspnea and wheezing, and circulatory collapse may be seen.

After an initial dose of 100 mg. of cortisone, 50 mg. is given every four hours for six doses and then 25 to 50 mg. every six hours for an additional day. Relief begins in thirty to sixty minutes after the first dose, and the patient is usually entirely comfortable within twelve hours, find Lawrence E. Shulman, M.D., Edyth H. Schoenrich, M.D., and A. McGehee Harvey, M.D., of Johns Hopkins University and Hospital, Baltimore. Symptoms of patients who require continuation of penicillin therapy can be controlled with concomitant cortisone therapy.

Serum sickness may follow administration of tetanus antitoxin or of diphtheria antitoxin. Symptoms resemble those with penicillin reaction. Again, striking improvement is noted one hour after an initial 100-mg. dose of oral cortisone. The agent is also indicated in cases of serum sickness with nervous system involvement.

A satisfactory response to cortisone may also be achieved in severe reactions from sulfonamides, PAS, or gold.

Serum sickness reactions may also result from ACTH therapy. In 1 such case intramuscular cortisone was then effective.

Allergic reactions to therapeutic agents: treatment with adrenocorticotrophic hormone (ACTH) or cortisone. *Bull. Johns Hopkins Hosp.* 92:196-209, 1953.

*Four weeks of penicillin therapy  
plus enhancing and synergistic agents are needed  
in bacterial endocarditis.*

## Antibiotics for Bacterial Endocarditis

LEO LOEWE, M.D., AND CLIFFORD COHEN, M.D.  
*Jewish Hospital of Brooklyn*

HAROLD B. EIBER, M.D.  
*New York Medical College, New York City*

TO avoid development of resistant bacterial strains in patients with subacute bacterial endocarditis, initial antibiotic therapy must be definitive.

Otherwise the half-arrested bacteria, sequestered in poorly vascularized vegetations, escape action of the body's protective mechanisms and under the slowly cicatrizing lesion are safe from drugs.

Subcurative antimicrobial therapy invites development of resistance, with continuing infection and serious valve mutilation, explain Leo Loewe, M.D., Clifford Cohen, M.D., and Harold B. Eiber, M.D.

Penicillin in adequate dosage remains the primary agent in management of endocarditis. In the conventional form of the disease, 1,800,000 to 2,000,000 units of procaine penicillin given intramuscularly in two divided doses daily is sufficient to insure against treatment failure.

The action of penicillin may be enhanced and bactericidal levels assured if 0.5 gm. of probenecid (Benemid) is administered orally every six hours around the clock. Streptomycin potentiates penicillin ef-

fects and may be incorporated into the dosage plan in amounts of 1 gm. daily intramuscularly.

This combined antibiotic schedule should be continued for no less than four weeks. If time and expense of hospitalization must be reduced, and the patient's condition warrants, the latter phases of the treatment may be completed at home.

Bacitracin is extremely effective with penicillin and is a good addition to the treatment schedule. When bacitracin is added, lesser amounts of penicillin and streptomycin may be needed.

When a bacterial resistance is believed responsible for refractoriness, the organism should be isolated from blood cultures and the sensitivity to antibiotics individually and in combination determined. The results of sensitivity tests, together with consideration of synergistic or interference properties of the effective antibiotics, determine the final treatment schedule.

Bacteriostatic drugs such as chlorotetracycline, terramycin, and chloramphenicol should be avoided in endocarditis therapy.

Factors in the proper selection of antibiotic programs for the cure of the refractory case of subacute bacterial endocarditis. *Antibiotics & Chemother.* 3:681-692, 1953.

*The retinae are singularly effective as mirrors reflecting the course of hypertensive disease.*

## Hypertension with Papilledema

MARY F. SCHOTTSTAEDT, M.D., AND MAURICE SOKOLOW, M.D.  
*University of California, San Francisco*

THE onset of blurring of vision or gross hematuria is an ominous sign in cases of hypertension. Mary F. Schottstaedt, M.D., and Maurice Sokolow, M.D., who report observation of 104 cases of hypertension with papilledema, malignant hypertension, find that life may be lengthened if vigorous therapy is started before renal function is impaired or before the heart or cerebral vessels are irreversibly damaged.

The average age at the time of diagnosis of malignant hypertension is about 43 years, the ratio of men to women being 3:2. A family history of hypertensive cardiovascular disease is noted in half the patients. Most patients have had previous hypertension and a large number have had scarlet fever or frequent severe sore throat and renal disease.

The average survival from the time of onset of malignant hypertension, as determined by the start of blurred vision or of gross hematuria, is approximately eight and one-half months. Other chief disorders are headache, shortness of breath, fatigue, weakness or malaise, and gastrointestinal symptoms. Suddenness and severity of

onset seem to be related to a rapid progression into the malignant phase.

Loss of vision and appearance of Keith-Wagener grade IV retinitis are closely correlated. All 104 patients at some time had papilledema, vascular changes, and exudates.

The heart is almost universally affected during malignant hypertension, most of the patients having enlarged hearts, cardiac failure, or abnormal electrocardiograms.

Central nervous system changes are prominent, headaches being extremely common. Cerebrovascular disturbances appeared in 44 patients, 25 having strokes. Convulsions occur mostly in patients dying of uremia. Cerebrospinal fluid pressure is raised in over half of cases.

The therapeutic effectiveness of repeated spinal taps was estimated as beneficial for 22% of the patients, ineffective in 66%, and harmful for 12%. The spinal fluid protein content was increased in 69%; 10 patients nevertheless had normal spinal fluid pressure.

Renal impairment in malignant hypertension is common and may develop rapidly. Nephrosclerosis is the most likely kidney lesion when good renal function is retained.

The natural history and course of hypertension with papilledema (malignant hypertension). *Am. Heart J.* 45:331-362, 1953.

Lack of proteinuria is a favorable sign.

The best hope for therapy exists while renal function is good; hence the necessity for early diagnosis of malignant hypertension. Satisfactory renal function is necessary for successful sympathectomy or low-sodium diet. If renal function is impaired, such drugs as Diben-

mine, hexamethonium, or the veratrum or dihydroergotamine alkaloids may be used.

The high incidence of chronic pyelonephritis, 40%, found during postmortem examination shows the need to consider pyelonephritis in cases of malignant hypertension. Nephrectomy may effect a cure in unilateral atrophic pyelonephritis.

## Shock after Myocardial Infarction

THEODORE R. FINK, M.D., CARL J. D'ANGIO, M.D.,  
AND SOL BILOON, M.D.

TREATMENT of patients with shock complicating acute myocardial infarction depends on whether the venous pressure is elevated or low. The mortality rate is high, however, even when the blood pressure responds favorably to therapeutic measures.

Some patients have normal or low venous pressure and manifestations of shock, with sweating, anxiety, and pallor. In these cases the arterial and venous pressures will rise promptly upon administration of phenylephrine hydrochloride. Other patients have venous pressures of 12 cm. of water or over, with apathy and cyanosis. Sweating with these individuals is much less pronounced. A rise in arterial pressure and sometimes a fall in venous pressure are produced by digitalization with intravenous lanatoside C.

The sequential appearance, on occasion, of both high and low venous pressure states in the same patient would indicate that these are two phases of one syndrome, not two individual syndromes.

Theodore R. Fink, M.D., Carl J. d'Angio, M.D., and Sol Biloon, M.D., of the Morrisania City Hospital, New York City, believe that the initial shock accompanying myocardial infarction is a peripheral response to the grave injury sustained by the heart and is similar to the shock resulting from injury to other major organs. The low venous pressure attests to a diminished return to the heart.

Some of these patients die soon, but others recover quickly and spontaneously. When prolonged, however, the situation may alter; the pallor gives way to cyanosis, the venous pressure rises, and the heart fails so profoundly that the arterial pressure remains extremely low despite compensatory vasoconstriction.

Clinical study of shock following myocardial infarction. *J.A.M.A.* 151:1163-1165, 1953.

*Recurrence of prostatic cancer  
is unlikely if a five-year period after prostatectomy  
is safely passed.*

## Results of Total Prostatectomy

FLETCHER H. COLBY, M.D.

*Massachusetts General Hospital, Boston*

THE tendency is increasing to favor total prostatectomy for treatment of early cancer of the prostate. Postoperative complications are reasonably low and functional results are good enough to justify the procedure, believes Fletcher H. Colby, M.D., in reporting that 15 of 29 patients who had such operations five or more years ago are alive and free of the disease.

Early cancer of the prostate produces no symptoms. Such symptoms as may be noted with this disease at an early stage are usually caused by an associated benign hypertrophy. Hence, periodic rectal examinations for men over 50 years of age are strongly advisable. A histologic diagnosis of cancer should be obtained before total prostatectomy is performed.

Diagnosis by perineal biopsy and frozen section, the most reliable method for carcinoma of the prostate, is accurate in 91.6% of cases. Adequate tissue can be removed by a direct approach to the prostate. When the results of biopsy are negative, no harm results from the operation. Errors of perineal biopsy may be due to failure to submit sufficient tissue to the pathologist or to the difficulties of making an accurate diagnosis from sections

that are less well-fixed and stained than paraffin sections.

The accuracy of simple rectal palpation is over 70%. Cytologic examination is inadequate in the diagnosis of early lesions.

Needle biopsy is no more accurate than rectal examination and is a troublesome procedure. Accurate needle biopsy depends on the enthusiasm of the examiner, close cooperation with the pathologist, and careful procurement of tissue. Although a positive result from needle biopsy is proof of cancer, negative or unsatisfactory reports are of no value in excluding the disease. Popularity of the procedure is explained by the great assurance that exists in a definite histologic diagnosis of cancer before total prostatectomy is performed.

Total prostatectomy may be performed from the retropubic approach or perineal or combined abdominal and perineal approach. Spread to pelvic lymph nodes is found in one-third of cases; this closely approaches the 34.5% mortality rate by cancer within a five-year period after the operation.

The gland should be freed from attachments with as little manipulation as possible. Tissue removal should be as radical as permissible

Carcinoma of the prostate: results of total prostatectomy. *J. Urol.* 69:797-806, 1953.

and should include Denonvilliers' fascia and all the seminal vesicles with intervening tissue. The ureteral orifices must be clearly visualized and avoided. A good anastomosis between bladder neck and membranous urethra shortens convalescence and lessens the chance of stricture. The perineal position is a strain on elderly men with impaired circulatory systems, therefore the operation must occasionally be discontinued.

The mortality rate for total prostatectomy is about 5%. Complications are not frequent but include rectal damage and postoperative strictures between the bladder and the membranous urethra. Other complications are perineal fistula, epididymitis, postoperative hemor-

rhage, ureteral damage, and brachial plexus palsy.

Prophylactic femoral vein ligations are done to avoid pulmonary emboli after operation for patients who have large varicosities of the legs.

Urinary control is often poor immediately after operation but improves until 72% of all patients have fair or good control. The incontinent patient wears a bag or clamp. Fair control requires a pad or diaper. A good result is normal or nearly normal control with, at the most, some degree of stress incontinence or minor leakage.

Although perineural and capsular invasion seem to have little prognostic significance, invasion of seminal vesicles is probably serious.

¶ URINARY BLADDER PARALYSIS may follow the use of Apresoline in treatment for arterial hypertension. As the drug, l-hydrazinophthalazine hydrochloride, is not known to be a ganglionic blocking agent, D. R. Laurence, M.D., and N. A. Miles, M.B., of St. Thomas's Hospital, London, find no explanation for the phenomenon. A 68-year-old woman with a resting blood pressure of 220/90 had had no previous bladder trouble, but the complication developed two hours after a second oral dose of 25 mg. of Apresoline. Resumption of medication after spontaneous return of function again effected hypotension without causing cystoplegia, but the severity of the side reactions necessitated the cessation of treatment.

*New England J. Med.* 248:464-465, 1953.

¶ WILMS'S TUMOR in an adult may be successfully removed with survival of the patient. George R. Livermore, M.D., of Memphis reports a woman in good health ten years after a right nephrectomy at which an embryonal tumor the size of a medium grapefruit was excised. Symptoms arising from the renal mass had started three years before. Deep roentgen therapy preceded operation.

*J. Urol.* 70:141-145, 1953.

*An effective agent for urinary infections is found in a broad-spectrum nitrofurantoin given by mouth.*

## Furadantin for Genitourinary Infections

CHARLES M. NORFLEET, JR., M.D., AND HARRY M. CARPENTER, M.D.

*Wake Forest College, Winston-Salem, N. C.*

PARKER R. BEAMER, M.D.

*Indiana University, Indianapolis*

THE nitrofurantoin Furadantin has a broad antibacterial spectrum and is a safe, effective agent for treatment of urinary infections.

The drug, N-(5-nitro-2-furfurylidene)-1-aminohydantoin, is excreted in high concentrations in the urine shortly after oral administration. Sensitivity is uncommon even in individuals known to be sensitive to related compounds such as Furacin. A safety factor exists, since any great overdose produces vomiting, state Charles M. Norfleet, Jr., M.D., Parker R. Beamer, M.D., and Harry M. Carpenter, M.D.

The only side effects encountered in treating 50 patients were slight gastric uneasiness or nausea in 12% and vomiting in 2%. Most of the patients had acute or chronic cystitis or acute or chronic prostatitis. No appreciable changes in blood counts were noted. Almost all patients improved and showed excellent progress as determined by urinalyses and urine cultures.

Acute cystitis responds dramatically to Furadantin, with complete symptomatic and bacteriologic cures in most cases. Repeat courses of treatment lasting up to one week

may be necessary in persistent cases.

The drug is also apparently effective against prostatitis and acute pyelonephritis. Therapy may be continued in reduced dosage after symptomatic improvement until the urine is negative.

Furadantin was ineffective in the 1 case of abacterial urethritis and conjunctivitis observed. Pyuria was not changed in a case of tuberculosis but dysuria in conjunction with the latter disease was greatly improved.

Results of in vitro sensitivity studies of organisms isolated from acute and chronic infections of the genitourinary tract showed:

*Streptococcus pyogenes*—The only strain isolated was inhibited and killed by Furadantin in a concentration of 5 mg. per cent.

*Micrococcus pyogenes* var. *aureus* and *albus*—A high percentage of isolates were killed by concentrations of 20 mg. per cent of the drug or less; half this concentration produced definite inhibitory effects.

*Escherichia coli*—Most isolates were killed or inhibited by concentrations of 20 mg. per cent or less.

Furadantin in infections of the genito-urinary tract. J. Urol. 70:113-118, 1953.

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*Aerobacter aerogenes*—Approximately one-half the strains were killed by concentrations of 20 mg. per cent. Almost one-half the strains were resistant.

*Paracolobactrum* sp.(paracolon)—Only two-fifths of the strains of this organism were killed by 20 mg. per cent concentration; the rest were resistant.

Alpha hemolytic streptococcus—Only 2 strains were encountered;

one was resistant, the other was inhibited by 10 mg. per cent.

*Alcaligenes fecalis* (*Proteus*, *Pseudomonas aeruginosa*)—All strains tested were resistant to Furadantin in a concentration of 30 mg. per cent.

Sometimes when the in vitro tests showed resistance, cultures became negative and symptoms subsided after Furadantin therapy, affirming the drug's clinical effectiveness.

## The Bed Walker

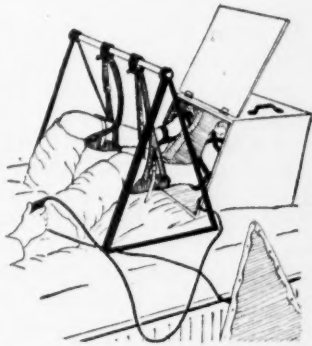
S. H. MAY, M.D.

AN electrically powered apparatus that simulates natural walking may be used in bed by patients who cannot or should not actively move the lower extremities. By setting in motion the numerous leg muscles moving the blood stream centripetally, the device overcomes venous stasis and is valuable in prevention of phlebothrombosis, ankylosis, osteoporosis, or trophic lesions.

The bed walker described by S. H. May, M.D., of the Goldwater Memorial Hospital, New York City, is powered by a three-quarter horsepower motor that propels 2 pedals, thereby alternately raising and lowering the attached shoes in which the patient's feet are inserted (see illustration). The thighs are supported by folded pillows to avoid fatigue, or, preferably, a bedstand is used—a bar connecting 2 metal frames placed on the bed over the patient's legs. From the bar 2 leather belts are suspended and the patient's calves are placed and fastened in these slings.

Five to eight minutes use of the walker is the most beneficial. The patient has control of the switch and can stop and rest at any time. Practically no energy is expended in use of the device.

The bed walker. Arch. Phys. Med. & Rehabil. 34:358-359, 1953.



*Ultrasonic radiation is capable of producing local analgesia without affecting underlying causes.*

## Uses of Ultrasonic Therapy

GEORGE MORRIS PIERSOL, M.D.

*University of Pennsylvania, Philadelphia*

SOUND waves with vibrations of high frequency, inaudible to the human ear, may be of therapeutic value in selected conditions, reports George Morris Piersol, M.D. The heat produced by sound waves is more penetrating and can be beamed more accurately than other types of heat.

Benefits appear to arise chiefly from the thermal effects of the waves. Therapeutic significance of nonthermal effects, such as increase of membrane permeability, has not yet been sufficiently assessed.

The waves with a frequency of 1,000,000 vibrations per second are the most useful, since lesser frequencies do not give deep penetration of heat. Equipment designed for the application of ultrasonic energy consists of a high-frequency generator, and an ultrasonic transmitter containing a piezo-electric crystal and electrodes, termed a transducer. In the transducer, electrical vibrations are converted into mechanical vibrations, in turn producing sound waves.

The machine used at high dosage can severely damage many tissues. Therefore, therapy with ultrasonic radiation has definite dangers and limitations.

Ultrasonic radiation will produce  
Therapeutic application of ultrasonic therapy.

sharply localized heating of living tissues and causes selective heating of bone cortex and marrow unlike that from any other source of energy in use for medical diathermy. Ultrasonic application obliterates epiphyseal lines and should not be used over growing bones.

High dosage of ultrasonics has a much greater destructive effect on the spinal cord of dogs than on the peripheral nerves and may severely damage tissue of hair follicles and testes.

Application of ultrasonic waves to the heart or the cervical ganglions may produce abnormal cardiac rhythm. Ultrasonic therapy should not be given to patients with cardiac disease or to pregnant women. Hemorrhage into the eye and detachment of the retina have been reported after this type of treatment.

Despite the disadvantages, the procedure is safe if performed with therapeutic dosage and suitable technics by a trained operator in properly selected cases. The dosage is practically self-limited, since patients feel and complain of considerable pain as soon as dangerous levels are approached.

Although ultrasonic therapy is used for many conditions, benefit

Postgrad. Med. 14:24-32, 1953.

is obtained for only a few specific types. The chief indications are arthritis or allied rheumatoid conditions, including myositis, acute subdeltoid bursitis, and fibrositis; diseases of the peripheral nerves, such as neuritis, especially when

involving the sciatic nerve, neuralgia, and causalgia; coccygodynia; and pain in phantom limbs. Ultrasonic therapy is also of value in vasospastic peripheral vascular diseases and pyogenic infections of soft parts.

## Trypsin Debridement of Chronic Ulcers

ALMA DEA MORANI, M.D.

THE rapid, selective, and nontoxic action of trypsin makes the material highly satisfactory for debridement.

Alma Dea Morani, M.D., of the Women's Medical College of Pennsylvania, Philadelphia, reports successful use of the proteolytic enzyme in 6 cases, in all of which surgical management had failed. The lesions included ulcer after radical mastectomy, hypertension ulcer of the ankle, pressure ulcer of the scalp, deep necrotic ulcer of the heel associated with chronic osteomyelitis, and diabetic gangrene of the foot.

When the lesion is moist and easily accessible, as with varicose ulcer, diabetic gangrene, or burns, trypsin is applied as a dry powder. A blower is useful for application. To insure the most effective pH, the wound is first irrigated with Sorensen's phosphate buffer solution. The lesion, which is kept in the horizontal plane, remains covered with the powder for thirty minutes; the powder is then re-applied several times daily until all necrotic tissue is digested.

Gelatin capsules containing trypsin powder may be inserted into sinuses or fistulous tracts that are so plugged with necrotic debris that irrigation is impractical.

Gauze dressings saturated with a solution of 250,000 units of trypsin in 25 cc. of Sorensen's solution may be laid on the wound for three hours. Evaporation is decreased by sealing the edges of the dressing or covering the dressing with plastic film or wax paper.

To avoid unnecessary use of large amounts of enzyme, mechanical debridement is done if feasible before and after trypsin application. If floating bits of necrotic material are removed by irrigating with sterile saline solution after use of trypsin, enzymatic therapy is enhanced. Dangling ends of rubber gloves are excellent reservoirs for the solution when irrigating necrotic lesions of the hands and feet.

Trypsin therapy in the management of chronic surface ulcers. *Plast. & Reconstruct. Surg.* 11:372-379, 1953.

*Early diagnosis and treatment  
of breast cancer is not invariably synonymous  
with curability.*

## The Problem of Breast Cancer

WILLIAM B. HUTCHINSON, M.D.

Seattle

MUCH time and energy are now expended in the radical treatment of breast lesions predestined at the time to be lethal. Any further progress that surgery can offer in dealing with mammary carcinoma must lie in determining how to recognize and eradicate the pre-cancerous breast, observes William B. Hutchinson, M.D.

Pathologic, clinical, and statistical observations show that the biologic behavior of cancers of the breast has little correlation with the so-called early lesion, the clinical symptoms, or the location, size, or duration of the tumor. Axillary lymph nodes are involved in one-half of cases in which the growth is known less than one month.

The several modes of tumor spread are disregarded today because of overemphasis on lymphatic spread. This is based on the frequent misconception that the lymphatic system is an autonomous circulatory system until reaching the major blood vessels. However, blood and lymphatic systems at the point of tissue-fluid movements are closely related. Herein lies the explanation of the all too frequent case with a small early lesion, uninvolved nodes, yet widespread blood-borne metastases.

Intercostal dissection and radical mastectomy. Arch. Surg. 66:440-445, 1953.

Valuable information on the spread of breast cancer can be obtained in the following manner: Excision and frozen section of the primary breast tumor is performed to establish the diagnosis. Any questionable supraclavicular lymph nodes are removed and sectioned.

If supraclavicular metastases are not found, a Halsted radical mastectomy is done, followed by exploration of the first 3 intercostal spaces. This is accomplished by severing the intercostal muscles from the costochondral junction with the sternum. The pleura and the internal mammary vessels are thus exposed and are stripped of any lymph nodes or fatty tissue. The exploration is done with rapidity and is never injurious to the patient.

The results of such a study reveal that too much attention is being given to the axillary avenue of spread and far too little to spread along the internal mammary vessels. In an analysis of 81 patients, 50% had axillary metastases and 26% had intercostal metastases. Intercostal metastases without axillary involvement are rare.

The site of the lesion does not necessarily determine the direction of spread. Many lesions in the out-

er quadrants of the breast spread to the internal mammary lymph nodes; therefore, any operative procedure considered necessary in this area should not be limited to just medial quadrant lesions.

Radical mastectomy, as now performed, is grossly inadequate in dealing with cancer of the breast, since the lesion has spread to the internal mammary lymph chain in a large percentage of cases and all patients with internal mammary spread at the time of radical mastectomy are dead in three years.

The problem has two solutions: 1] If surgery is the answer, then surgery should be all-inclusive. The surgical scope should include axilla, supraclavicular and retroclavic-

ular structures, en bloc dissection of the internal mammary chain, and anterior mediastinal structures. However, many are skeptical that any operative procedure can accomplish this.

2] If cancer can be proved, by biopsy or frozen section of lymph nodes at the time of the initial surgery, to have extended to the supraclavicular or internal mammary nodes, then the cancer is surgically incurable and a simple mastectomy should be performed. After wound healing, deep roentgen therapy is administered to the axilla and the supraclavicular and internal mammary chains bilaterally, in the hope, not of curing, but of delaying the progress of the tumor.

## Age and Prognosis of Thyroid Cancer

GEORGE CRILE, JR., M.D., AND JOHN B. HAZARD, M.D.

SURGEONS who do not have access to frozen section diagnosis can evaluate thyroid cancer quite accurately by the patient's age. If the patient is under 40 years, the tumor nearly always has very low-grade malignancy, but the prognosis for elderly patients is poor, find George Crile, Jr., M.D., and John B. Hazard, M.D., of the Cleveland Clinic, Cleveland.

Thyroid cancer can be divided into 2 major types, papillary and nonpapillary. In younger persons, growth follows the first pattern and is almost uniformly curable by adequate but not mutilating resection. The primary tumor in the gland should be taken out completely, with cervical and upper mediastinal metastases.

Even if neoplastic tissue is predominantly adenomatous or alveolar, most thyroid cancers developing before middle age behave like papillary forms. The rare nonpapillary type noted under the age of 40 is usually angioinvasive adenoma with low malignancy.

Carcinoma in the older group is generally nonpapillary and dangerous. When areas of anaplasia develop, the outlook is grim.

Relationship of the age of the patient to the natural history and prognosis of carcinoma of the thyroid. *Ann. Surg.* 138:33-38, 1953.

*Lesion type, site, and duration  
and patient's age all influence prognosis of acute  
colonic obstruction.*

## Acute Obstruction of Colon

WALTER F. BECKER, M.D.

*Louisiana State University, New Orleans*

CARCINOMA and volvulus are the most common causes of mechanical obstruction of the large bowel requiring prompt treatment. Simple operations provide immediate relief, and elective resection of the bowel can be done later, observes Walter F. Becker, M.D.

The colon is the site of obstruction in one-fifth of cases of acute mechanical intestinal obstruction. The condition occurs in every decade, but is more frequent in the middle-aged and elderly. In 70% the causative factor is situated at or distal to the splenic flexure, especially in the sigmoid. Approximately 10% of the obstructions are strangulated.

Carcinoma is the obstructing cause in half the cases, and volvulus in about a quarter. Incarcerated large bowel hernias and colocolonic intussusception are common.

Volvulus of the sigmoid or transverse colon can be treated by emergency operative reduction, followed in a short time by elective resection of the area with end-to-end anastomosis. Resection is done because of the high rate of recurrence of volvulus. Cecostomy after detorsion in acute cecal volvulus results in decompression plus fixation of the obstructed bowel. Emer-

gency exteriorization resection is recommended for irreversible strangulation in a volvulus anywhere in the colon.

Acute malignant obstruction of the large bowel requires the earliest possible operation since relief of intracolonic pressure is the primary factor in preventing death. Surgical decompression should be done with the least possible manipulation and without exploration.

Nonoperative intestinal intubation is an important adjunct in the treatment of intestinal obstruction but must not be used as the sole therapy in acute malignant colon obstruction. A closed-loop obstruction usually exists between the competent ileocecal valve proximally and the tumor distally, which becomes essentially a strangulated obstruction as the proximal colon distends.

Colon resection with acute obstruction is dangerous. A simple loop right transverse colostomy is relatively safe for immediate alleviation in acute obstructing carcinoma of the left colon.

When the tumor is in the distal ascending colon, the hepatic flexure, or the right half of the transverse colon, a cecostomy is advisable. If the patient has an obstructing cecal

Acute obstruction of the colon. Surg., Gynec. & Obst. 96:677-682, 1953.

carcinoma, an ileotransverse colostomy should be performed, provided the ileocecal valve is incompetent, the ileum is not greatly distended, and the patient's general condition is satisfactory.

When the ileocecal valve is competent, the ileum is completely divided and the proximal end is used to effect an ileotransverse colostomy. A large catheter is inserted through the distal ileum into the distended cecum for decompression, and the distal ileal stump is brought out through the abdominal wall as a mucous fistula.

Nearly a third of patients with

acute colon obstruction die, the major factors influencing the prognosis being the age of the individual and the site, type, duration, and etiology of the obstruction. The death rate increases greatly after the age of 60. The mortality is higher with sigmoidal and with strangulated obstruction and for obstructions caused by carcinoma, intussusception, or extrinsic pressure from abdominal carcinomatosis.

When the illness is more than twenty-four hours old, as the vast majority are, deaths are twice as frequent as when the condition is treated earlier.

## Electrolyte Loss from Gastric Suction

FREDERIC W. TAYLOR, M.D.

CONTINUOUS aspiration of stomach contents by a nasal suction tube is a valuable part of postoperative treatment but may dangerously deplete chloride and other electrolytes, especially if the patient is allowed to drink water freely.

The oral fluids keep the suction tube in good working order but also wash chloride from the gastric mucosa. The loss is probably not significant when suction is used for only two or three days, but a critical situation may develop over longer periods, finds Frederic W. Taylor, M.D., of Indiana University, Indianapolis.

When nothing is allowed by mouth after surgery and 3 liters of 5% glucose in water is administered intravenously each day, the gastric suction depletion is nearly 2 liters, with an average loss of 188 mEq. of chloride, equal to about 11 gm. of sodium chloride. During the same period, the daily urine output is nearly 3 liters with an average loss of 3 gm. of chloride, expressed as sodium chloride.

If the same amount of intravenous fluid is given, and 3 to 4 liters of water is allowed orally each day, the gastric suction output increases to over 5 liters, with a chloride loss of 256 mEq. Although the urine output does not increase, the urinary chloride loss is 5 gm. of chloride, expressed as sodium chloride.

Electrolyte loss by postoperative nasal-gastric suction. *Arch. Surg.* 66:538-544, 1953.

*Symptoms in patients with cholelithiasis may be caused by fibrosis of the sphincter of Oddi.*

## Fibrosis of Sphincter of Oddi

RICHARD B. CATTELL, M.D., AND BENTLEY P. COLCOCK, M.D.  
*Lahey Clinic, Boston*

OBSTRUCTION to the free flow of bile through the lower end of the common duct by fibrosis of the sphincter of Oddi is a common cause of failure of cholecystectomy and may necessitate a second operation. Bile duct exploration is often necessary if benign obstruction of the ampulla is not to be missed, stress Richard B. Cattell, M.D., and Bentley P. Colcock, M.D.

The pathogenesis of fibrosis of the sphincter of Oddi and the papilla of Vater is not fully understood but longstanding spasm from any cause may be an important factor in the development. Infection in the biliary tract and of the mucosa of the duodenum, as well as the head of the pancreas, may be responsible. The common association of stone in the common bile duct with this finding indicates that irritation and associated infection and muscle spasm may lead to fibrosis.

At the time of exploration of the common duct, either in a primary or secondary operation, the patency and size of the sphincter and papilla must be demonstrated. This is ordinarily done by graduated dilators.

Patency can usually be shown by the tactile sensation of the passage of the bulbous tip through this

area, but not infrequently the probe may be considered to have passed through the papilla and even the indentation of the anterior wall of the duodenum may have been observed, without actual passage of the probe through the papilla. If any doubt exists, the duodenum should be opened by a longitudinal incision so that the papilla can be visualized.

Inability to get through the ampulla and papilla may be caused by any one of the following conditions: common duct stone, stricture of the papilla of Vater, saccular dilatation of the terminal common duct, devious course of the common duct through the pancreas, fibrosis of the sphincter of Oddi, pancreatitis, penetrating duodenal ulcer, papilloma of papilla of Vater, and carcinoma of the periampullary area.

Four different methods aid the discovery of obstruction to the lower end of the common duct: [1] manometric pressure studies, [2] cholangiography, [3] operative exploration of the common bile duct, or [4] transduodenal exploration.

At the time of common duct exploration, if a probe cannot be passed through the sphincter of Oddi, the cause of obstruction must

Fibrosis of the sphincter of Oddi. *Ann. Surg.* 137:797-806, 1953.

be demonstrated. The incision in the duct must be large enough to permit the passage of instruments.

The duodenum and head of the pancreas should be freed and elevated to change the direction of the common bile duct. The latter maneuver frequently leads to successful passage of a probe and avoids the sacculation at the lower end of the common duct and the uneven course of the common duct through the pancreas.

At times, a fine probe can be passed, but difficulty is experienced with graduated dilators. If a 3-mm. dilator cannot be moved easily through the ampulla, fibrosis of the sphincter or stricture of the papilla probably exists. Under these circumstances a transduodenal exploration should be done, permitting exploration from each end.

With the demonstration of fibrosis, one of two types of correction can be employed, depending upon the degree and extent of the obstruction:

1] The majority can be relieved by forcible dilatation from above with graduated dilators. The patency is maintained after dilatation by an indwelling long T tube, with one end being passed through the ampulla into the duodenum.

2] The alternate method of correction is division of the mucosa of the papilla and division of the sphincter muscle through the transduodenal approach. The long T tube is used after sphincterotomy also.

With fibrosis of the sphincter of Oddi, complete relief of symptoms can be accomplished in 90% of cases.

¶ SEVERE BURN SHOCK and toxicity respond rapidly to early intravenous administration of polyvinylpyrrolidone. After infusions of a 3.5% dilution of the drug in Ringer's solution (PVP-macrose), John W. V. Cordice, Jr., M.D., Josephine E. Suess, and John Scudder, M.D., of Harlem Hospital and Columbia-Presbyterian Medical Center, New York City, observe immediate improvement in blood pressure and pulse and fall in hematocrit. In 4 of 8 patients, the blood volume rose in six to forty-eight hours without significant alteration in electrolytes; in 3, gross hemoglobinuria cleared within forty-eight hours. Urinary output was augmented in most instances, with excretion of 50 to 70% of the injected material within twenty-four hours. None of the 4 deaths was attributable to early shock, hemoconcentration, or toxicity; impaired liver function was demonstrated in 3 of these fatal cases. Hypoproteinemia may occur in patients treated with the pyrrolidone derivative and must be combated with adequate diet, intravenous plasma, albumin, blood transfusions, and early skin grafting. The compound is nonantigenic, sterilizable, inexpensive, and well tolerated when given in amounts of 1,000 to 3,000 cc. during one to eight and one-half hours.

*Surg., Gynec. & Obst.* 97:39-44, 1953.

*The insidious progression of thrombosis of the aortic bifurcation makes early diagnosis imperative.*

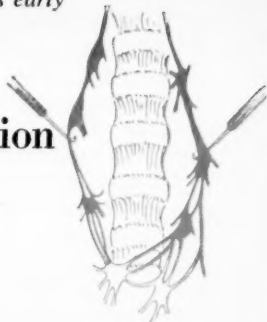
## Thrombosis of Aortic Bifurcation

PETER BEACONSFIELD, M.D.

*Postgraduate Medical School of London*

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*Paris*



MANY cases of thrombosis of the aortic bifurcation are not recognized. The condition begins so insidiously and progresses so slowly that the vessel becomes completely obliterated before alarming manifestations arise.

After an analysis of 35 cases, Peter Beaconsfield, M.D., and Jean Kunlin, M.D., state that diagnosis is comparatively simple and prognosis good with early treatment.

The thrombus usually begins in one common iliac artery, spreads upward toward the aortic bifurcation, and then invades both the aorta and the opposite common iliac artery. Occasionally, the process begins in the aorta below the origin of the inferior mesenteric artery and spreads downward.

The thrombus grows by extension along the wall, narrowing a considerable length of the vessel before occlusion is complete. This slow progress permits collateral blood vessels to develop and, therefore, early symptoms are slight. Often the thrombosed aorta becomes adherent to the prevertebral fascia and adjacent veins and lymph nodes.

Insidious thrombosis of the aortic bifurcation.

Most cases are caused by arteriosclerosis. Occasionally, inflammatory arteritis, thromboangiitis obliterans, syphilitic aortitis, or trauma is implicated.

In the early stages the disease is almost exclusively seen in middle-aged men in good health. The patient consults the physician with one or more of the following symptoms: [1] extreme liability to fatigue of both lower extremities, [2] pain, unilateral or bilateral, which is more like a dull ache than intermittent claudication, [3] low back pain, and [4] loss of sustained erection because of the poor blood supply to the corpus cavernosum.

Physical examination reveals no arterial pulsation in either leg. Pallor of the legs is usually noticeable and often pronounced. In late stages, severe pain, edema, rubor, ulceration, and gangrene appear.

An aortogram will demonstrate the site and size of the thrombus, state of the arterial wall, and extent of collateral circulation.

Treatment is bilateral lumbar sympathectomy to improve the circulation to the limbs. When possible, the thrombosed portions of

Arch. Surg. 66:356-364, 1953.

the terminal aorta and common iliac arteries are resected. The removal of the thrombosed segment is desirable because otherwise the thrombus may continue to grow, eventually involving the renal vessels. Arterectomy gives considerable pain relief. If gangrene occurs, amputation may be necessary.

If bilateral sympathectomy alone is done, the second, third, and fourth lumbar sympathetic ganglia are removed through a transperitoneal medial incision. This approach conserves some collateral arteries.

If the aorta is to be resected, the operation is done in two stages. First, a right lumbar sympathectomy is performed. One or two weeks

later, the left sympathetic chain and the aortic bifurcation are removed through an extraperitoneal iliac approach.

Resection of the aortic bifurcation should not be done if the patient has advanced arteriosclerosis in a much calcified aorta, since such a vessel cannot be ligated and sutured satisfactorily. The operation is also interdicted with extensive periarteritis or if the patient cannot tolerate a major procedure.

About 80% of patients with early signs and symptoms are improved after bilateral lumbar sympathectomy. Without treatment, all patients eventually have bilateral amputations.

## Antibiotics and Breast Abscess

C. P. MILLS, M.D.

PROLONGED penicillin treatment for an acute mammary abscess may so attenuate the signs and symptoms that the need for early incision is disregarded or the lesion becomes difficult to differentiate from carcinoma.

When antibiotics are used early and vigorously, the most severe infections can be completely aborted. However, if the administration is not begun until the infection is firmly established, the extent of surgical intervention may be modified but complete unaided resolution is unlikely, states C. P. Mills, M.D., of the Postgraduate Medical School of London.

Timing of drainage is important. If performed at the wrong time, profuse bleeding occurs and free drainage may be difficult. While penicillin is relieving the pain of a breast abscess, a dense local inflammatory reaction may develop. Although only a small collection of pus is left to be drained, poorly timed surgery can lead to a long and tedious recovery.

Continued penicillin therapy allows the development of a hard, painless, fixed mass simulating carcinoma.

Mammary abscess. *Brit. M. J.* 4825:1427-1429, 1953.

*The diagnosis of coin lesion is only presumptive until histologic study is performed.*

## Pulmonary Coin Lesions

CLIFFORD F. STOREY, M.D., ROALD A. GRANT, M.D.,  
AND BRUCE F. ROTHMANN, M.D.

*U. S. Naval Hospital, St. Albans, N. Y.*

**SOLITARY**, rounded, peripheral masses in the lung should be excised without a long period of observation. A significant percentage are malignant.

Pulmonary coin lesions may be defined as single, round or oval nodules, 1 to 5 cm. in size, with sharply circumscribed borders. The tumors are homogeneous in density or contain calcium and are surrounded on all sides by healthy appearing lung. No symptoms are produced. Such a definition eliminates larger, more definitely malignant masses, Ghon tubercles, and hilar, mediastinal, and chest wall masses, believe Clifford F. Storey, M.D., Roald A. Grant, M.D., and Bruce F. Rothmann, M.D.

Discovery of the tumor is usually accidental during routine roentgen examination of the chest. The coin lesion has no typical location, being found in any of the 5 lobes of the lung. Lesions that are later proved to be tuberculomas are ordinarily not in the usual sites for tuberculous lesions.

An accurate histologic diagnosis of the tumor can be made only after the pathologist examines the specimen. Most other diagnostic procedures prove fruitless.

Coin lesions of the lung. *Surg., Gynec. & Obst.* 97:95-104, 1953.

A posteroanterior stereoscopic and appropriate lateral chest roentgenogram should always be made to locate the lesion precisely. A Potter-Bucky grid film is helpful in the lateral view. Tomograms generally add no important information.

A bronchoscopic examination is done in each case to eliminate the possibility of tuberculous endobronchial disease that might contraindicate use of immediate surgery. Bronchial aspirate is smeared and cultured for acid-fast bacilli and studied cytologically by the Papanicolaou method for malignant cells. Skin tests for tuberculosis, histoplasmosis, and coccidioidomycosis are performed.

Such special examinations as barium enema, gastrointestinal series, and retrograde or intravenous pyelograms are not necessary unless symptoms point to a primary malignant growth with metastasis of the lung.

The cancer rate for coin lesions is reported as from 7.3 to 55%. The wide variation results from the lack of a precise definition of the term, coin lesion, and the selectivity of the material in different series. For instance, the hospital

at St. Albans is a tuberculosis center for the Navy, and the cancer rate there of 17.5% in 40 consecutive nodules may be because of the selected group of patients.

Most pulmonary coin lesions are tuberculomas or primary metastatic carcinomas. Early surgery for cancer is recognized as imperative and excision of any small circumscribed tuberculous foci is now in favor. Tuberculomas may enlarge, even after a prolonged quiescent period. Blocked tuberculous cavities may break down after long periods of dormancy, permitting bronchogenic dissemination of the disease.

Resolution of the lesions spon-

taneously or after medical treatment cannot be anticipated, and any attempt to predict the behavior of an individual lesion is only a guess. Surgical extirpation should be done shortly after the mass is first noted.

The type of surgery depends upon the findings at the operating table. The tumor should be sectioned immediately after removal. If the diagnosis is not obvious from gross inspection, frozen sections are made and a histologic examination done.

In capable hands, the mortality rate for excision of coin lesions is about 0.5%.

## Procaine Injection of Plantar Warts

EDWARD C. BRANSON, M.D., AND ROBERT L. RHEA, JR., M.D.

INJECTION of novocain under pressure into the base of a plantar wart relieves symptoms in practically all cases and usually destroys the growth, apparently by causing ischemic necrosis. The method is not disabling, rarely requires hospitalization, and is especially convenient for multiple mosaic lesions.

At the Fifth General Army Hospital, New York City, where 48 persons were treated and 30 observed for six months, warts persisted in only 7 instances and these were asymptomatic.

A 26-gauge needle and Luer-Lok dental syringe are employed by Capt. Edward C. Branson and Col. Robert L. Rhea, Jr., M.C., U.S.A. If the needle is properly placed, tissue will offer resistance to injection, so that skin is blanched and the wart elevated.

The needle should be inserted at an angle through healthy skin next to the lesion, penetrating to the stratum germinativum. Through a single puncture, 2 or 3 cc. of 1% novocain is injected under pressure into the base of the wart. Salt solution would probably be as effective, but local anesthesia prevents several hours of pain after treatment. Symptoms usually disappear in twenty-four hours; the wart softens and is lifted out with forceps in a week.

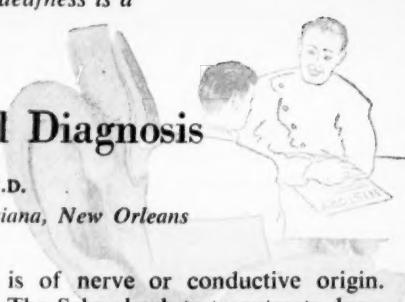
Plantar warts. *New England J. Med.* 248:631-632, 1953.

*The most valuable aid in diagnosis of the cause of deafness is a careful history.*

## Deafness: Differential Diagnosis

LUCIAN W. ALEXANDER, M.D.

*Tulane University of Louisiana, New Orleans*



HEARING impairment can be quickly demonstrated and classified by the employment of simple methods.

First a careful general and auditory history is obtained. Special attention is paid to familial hearing defects and the relationship of deafness to previous disease and other factors. The patient is carefully questioned about the hearing loss. Often the clue to diagnosis is provided by the detailed account, declares Lucian W. Alexander, M.D.

Gross abnormalities are found by general physical examination. After the external ear is evaluated, the condition of the external auditory canal and ear drum is determined. The mobility of the drum and ossicles is tested by the pneumatic speculum. The eustachian tube is inflated to determine patency, abnormal secretions, or perforation. The nose and throat are investigated. Cytologic studies should always be made.

Tests with tuning forks with double vibrations from 16 to 4,096 per second are performed for upper and lower limits of hearing. The Weber test determines, by comparison of bone conduction on each side, whether monaural deafness

is of nerve or conductive origin. The Schwabach test contrasts duration of bone conduction of the patient with that of the examiner. The Rinne test compares duration of bone and air conduction in the ear tested.

The audiometer permits rapid testing by both air and bone conduction, with measurement of loss in decibels, and provides a permanent record. The audiometric curve indicates the type of loss.

### CLASSIFICATION

In *conductive deafness* hearing by air conduction is better for high tones. Very low tones become inaudible if the lower tone limit is raised. In advanced conditions, loss for both high and low tones is approximately equal and the audiometric curve is flat. Bone conduction is normal and results of the Rinne test are negative.

In *perceptive deafness* hearing by air conduction is better for low tones and the upper tone limit may be lowered. Bone conduction loss parallels air conduction loss; results of the Rinne test are positive.

*Mixed deafness* presents characteristics of both the conductive and perceptive types. Besides significant air-conduction loss for all frequen-

The differential diagnosis of deafness. South. M. J. 46:372-378, 1953.

cies, increasing loss in the high frequencies occurs. Tones of low frequency are heard fairly well by bone conduction, but hearing for higher frequencies is lost or greatly impaired. Results of the Rinne test are usually negative when fork 256 or 512 double vibrations are used. The Weber test with fork 256 double vibrations is greater toward the more affected side.

#### ETIOLOGIC FACTORS

Possible causes of conductive deafness include chronic eustachian tube obstruction, acute or chronic suppurative and secretory otitis media, congenital auditory canal atresia, tympanic perforations, and otosclerosis. Perceptive deafness may be caused by auditory neuritis, internal ear trauma, syphilis, acoustic neuroma, psychosomatic causes, Ménière's disease, and deaf mutism. Mixed deafness occurs most commonly with long-standing middle ear disease.

*Middle ear infection* is the most frequent cause of deafness, the condition usually being unilateral. History makes the origin apparent. Otoscopic examination shows a thickened, retracted drum. Audiometry demonstrates a lower tone loss in acute cases and a downward slope for high frequencies in chronic cases.

Eustachian tube obstruction by *nasopharyngeal lymphoid hyperplasia* may produce an insidious loss of acuity for higher tones.

*Presbycusis* is a slowly progressive hearing loss for high-pitched tones which comes with advancing age. The patient's complaint of

deafness is often greater than hearing tests indicate.

Hearing loss from *arteriosclerosis* is for all frequencies. Tinnitus is almost uniformly associated and furnishes the clue to etiology.

*Otosclerosis* is the most important cause of progressive conductive deafness. The condition is the only common manifestation of sex-linked inherited deafness. Although both ears are affected, progression is more rapid on one side. Tinnitus is almost always present. The audiometric picture is typical.

*Rubella* in the first trimester of pregnancy may affect the fetal labyrinthine capsule and produce conductive deafness. Complicating some epidemics of *mumps* is a unilateral perceptive deafness. Auditory impairment in *congenital syphilis* is easy to diagnose if other stigmas are present. Hearing deteriorates rapidly bilaterally with complete loss of cochlear and vestibular function. In *acquired syphilitic deafness*, audiometry is typical of nerve deafness. The middle ear, mastoid process, or eustachian tube may be affected.

Some types of *head injury* are more likely to produce deafness: [1] transverse fracture of the petrous pyramid—total deafness on the injured side, [2] longitudinal skull fracture—usually conductive, and [3] brain concussion—loss for all frequencies.

*Traumatic deafness* is seen in persons with noisy occupations, such as boiler makers or airplane pilots. Loss depends on numerous factors and individual reaction. Occasionally the drum is ruptured.

The audiometric pattern is typical of that with cochlear deafness. High frequencies are affected first.

*Caisson deafness* is caused by sudden changes in atmospheric pressure and in nitrogen concentration of the tissues. Perceptive as well as conductive loss may result.

Hearing loss in *Ménière's disease* is generally a progressive perceptive deafness. Inconstant results are

obtained by testing. Diagnosis is simplified by the association with cyclic attacks.

The confused auditory findings in *psychogenic deafness* give a clue to the diagnosis. Response to narcosynthesis is the best method for confirmation and cure.

Other causes of deafness include allergy, streptomycin therapy, hypothyroidism, and neoplasms.

## Chronic Serous Otitis Media

M. TAMARI, M.D., AND LOUIS WEINSTEIN, M.D.

EARLY recognition of secretory otitis is imperative to prevent progressive hearing loss.

Fluid in the middle ear is the only positive criterion for diagnosis of the serous state. Conditions precipitating accumulation of fluid are [1] changes in the auditory tube, either during acute rhinitis, nasopharyngitis, or pharyngitis, or secondary to allergic states, or as a result of obstruction from benign or malignant growths; [2] decreased air pressure in the tympanum; [3] lymphatic blockage; and [4] specific local allergic changes.

M. Tamari, M.D., of the University of Illinois, Chicago, and Louis Weinstein, M.D., of Lafayette, La., report a chronic case of serous otitis media in which a moderately hard white polypoid mass was found in the attic region. The middle ear apparently was sealed off from the attic and the drum membrane below the short process was thickened. After removal of the thick cortex, the patient was relieved of tinnitus and hearing improved.

Histologic findings included increase in vascularity of cortical bone, bone resorption and redispersion in the bony cell walls, and considerable exudate and fibrous tissue replacement of normally air-containing cells with slight inflammatory reaction.

Accumulated fluid in the tympanum and mastoid cells is rich in protein; the amount of protein determines whether the effusion is classed as an exudate or transudate.

Rapid and recurrent filling of the middle ear is frequently seen after puncture and inflation because of reservoir of fluid in the mastoid cells and may require a mastoid cell exenteration.

Chronic serous otitis media. *Eye, Ear, Nose & Throat Monthly* 32:387-389, 1953.

*Intubation is the preferred procedure for emergency relief of obstruction of the trachea.*

## Emergency and Orderly Tracheotomies

WALTER B. HOOVER, M.D.  
*Lahey Clinic, Boston*

THE trachea must be opened immediately if a patient has severe respiratory obstruction when facilities for endotracheal intubation are not available. A more orderly procedure can be done when the obstruction is expected and before an emergency exists.

No time should be spent in investigation when the patient is ashen gray, breathing is labored and stridulous, and the suprasternal notch and supraclavicular fossa are retracted. The patient is placed with a pillow beneath the shoulders and neck extended. The soft tissues of the neck are pressed backward, tightening the skin over the trachea below the cricoid ring.

Walter B. Hoover, M.D., uses a deep incision longitudinally in the midline from the cricoid ring downward, cutting through all tissues and exposing the tracheal rings. The incision is extended through the tracheal ring, preferably below the first one.

The incision is held open by forceps, knife handle, or retractor to produce a free airway. The patient is turned to the side to avoid aspiration of blood until a tracheal cannula can be inserted. Artificial respiration and oxygen are given until normal respirations resume.

Emergency tracheotomy. *S. Clin. North America* 33:887-895, 1953.

Emergency tracheotomy may be necessary for acute laryngeal obstructions caused by stabbing, gunshot wounds, aspiration of foreign bodies, angioneurotic edema, or obstructive edema associated with an infection. Tenacious secretions, crusts, and edema may suddenly obstruct a chronically narrowed airway. Restlessness, apprehension, and inability to sleep are important early symptoms of obstructive dyspnea, and strong sedation should never be given.

Endotracheal intubation is preferable for emergency respiratory obstruction, since the tube can be quickly passed beyond the obstruction, resuscitation is more efficiently done, and secretions can be aspirated from below the obstruction. The trachea and bronchial tree can be visualized and studied, if necessary, or an orderly tracheotomy done while the endotracheal tube is in place.

Emergency tracheotomy should be a rare procedure in hospital practice. More orderly technic should be used before any obstruction becomes a necessity. A prophylactic tracheotomy is done when any operative procedure may produce laryngeal or tracheal obstruction.

If the patient has not had a cer-

vical operation, a median longitudinal incision can be made from below the cricoid prominence to the sternal notch. After separation of the soft tissues and hemostasis, the thyroid isthmus is divided between clamps. A circular hole is made just below the second tracheal ring, and a tracheal cannula of appropriate size is inserted as the endotracheal tube is removed.

The tracheotomy tube should be large enough in cross section to allow an adequate airway for breathing and should be long enough to pass well into the trachea and beyond the obstruction.

When the obstruction results from tumors in the neck region and masses may have to be excised, a collar incision frequently gives better exposure. The opening must be low enough to permit the cannula to lie free in the tracheal lumen without pressure from the upper wound flap. If pressure occurs, a small vertical midline incision is made in the upper flap for the tube, which should never press against the posterior tracheal wall.

Revision is done if a previous emergency tracheotomy results in the cannula lying through the first tracheal ring or against the anterior portion of the cricoid ring. The tracheotomy tube is placed at a lower level and antibiotics are given freely to decrease the possibility of infections and perichondritis of the cricoid ring.

Postoperatively, the trachea and bronchi must be cleared of crusts and secretions. Secretions are kept thin by use of electric humidifier, steam inhalations, damp gauze over the tracheotomy opening, intermittent instillation of normal saline or Ringer's solution into the cannula, or nebulization of a wetting agent in the area. Expectorants may be of benefit.

Antibiotics are given to control infections or perichondritis of the cricoid ring.

The nurse or patient may clean the inner cannula, but the outer tube should be changed only by an experienced physician. A duplicate cannula must always be on hand.

**NOSE AND SINUS INFECTIONS** may be effectively treated topically with nonirritating isotonic drugs not antagonistic to physiologic mechanisms. Using such an agent, Biomydrin, Sidney N. Busis, M.D., and Louis L. Friedman, M.D., of the University of Pittsburgh find that bacterial growth is inhibited and the mucosa shrinks without secondary congestion. Biomydrin, which is a combination of phenylephrine and thonzylamine hydrochlorides, gramicidin, neomycin, and thonzonium bromide, is applied daily or twice weekly as a nasal pack and administered by the patient thrice daily as a spray. In 13 instances no growth occurred in the first posttreatment culture; in 5 subjects a reduction in the number of organisms was found after only one or two days of treatment.

*Antibiotics & Chemother.* 3:299-306, 1953.

*While strictly limited, radical vaginal operation does benefit some patients with cancer of the cervix.*

## Vaginal Hysterectomy for Cervical Cancer

ALEXANDER BRUNSCHWIG, M.D.

*Cornell University, New York City*

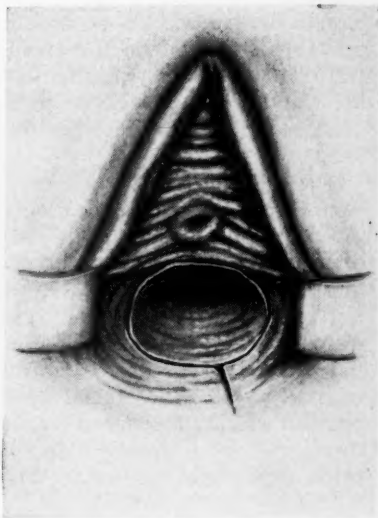
WHEN a patient is a poor surgical risk because of age, obesity, or cardiovascular status, radical vaginal removal of the uterus may be done for carcinoma of the cervix. For the operation to be feasible, the lesion must be small and the uterus mobile.

The physiologic strain, morbidity, and mortality are less than with radical abdominal panhysterectomy. However, while some of the hypogastric nodes and surrounding fatty tissues can be reached, failure to excise pelvic lymph nodes and fatty tissues of the obturator and external iliac regions is a calculated risk that limits use of radical vaginal hysterectomy for cancer.

The aggregate discomfort is no greater than that accompanying radium or vaginal cone roentgen therapy. The growth is definitely removed, and no question arises of failure of response to a therapeutic agent, such as irradiation.

Alexander Brunswick, M.D., makes a left Schuchardt incision in the vagina. Starting from the upper portion of the incision, a circular incision is made about the vaginal wall, detaching the upper four-fifths from the lower fifth (see illustration). The dissection is carried

Radical vaginal operation (Schauta) for carcinoma of the cervix. *Am. J. Obst. & Gynec.* 66:153-160, 1953.



Incision for radical operations

upward to separate the bladder from the anterior vaginal wall and the rectum from the posterior vaginal wall.

The open end of the upper vaginal tube is then closed horizontally by a continuous suture or by Kocher hemostats. The paracervical and parametrial tissues are then pushed mesially by pressing the index finger upward and laterally from each side of the vaginal cuff, while close-

ly hugging the levator ani muscle.

By elevation and traction of the vaginal cuff, entrance can be made into the cul-de-sac by incising the peritoneal reflection from the posterior surface of the cervix onto the rectum. The uterosacral ligaments are held taut and divided as far back as possible.

Further liberation of the bladder base in the midline can be done by traction downward on the vaginal cuff. The peritoneal reflection from the bladder onto the uterus is incised to the opening into the peritoneal cavity.

The main arterial supply to the lateral vaginal walls is then isolated, divided, and ligated. The lower ureters are freed at the entrances into the bladder wall. Uterine arteries are separated over and downward from the ureters.

The uterine fundus is grasped with a forceps and pulled downward in sharply anteflexed position through the peritoneal opening made behind the base of the blad-

der. The round ligaments are sectioned. Clamps are placed proximal to the ovaries on the suspensory ligaments, and the ligaments are cut and ligated, freeing the ovaries and tubes but leaving them attached to the uterus. All tissue connections to the uterus and vagina are cut and the latter removed.

The levator ani muscles are approximated over the lower colon by interrupted sutures. Peritoneal closure is not attempted, but iodoform gauze packing is inserted into the opening remaining after removal of the vagina and uterus. The packing is removed in twenty-four to forty-eight hours. A retention catheter is placed in the bladder.

The operation requires about an hour and the blood loss is about 700 cc. The required hospitalization is approximately twelve days; ambulation is begun on the first or second postoperative day.

Of 15 patients operated upon three and one-half to five years ago, 9 are living and well.

¶ AMENORRHEA with continued ovarian activity may be differentiated from severe types associated with total glandular deficiency by microscopic examination of the cervical mucus. When dried smears are examined under a magnification of 120 diameters, Guillermo di Paola, M.D., and Miguel Lelio, M.D., of Hospital Rivadavia, Buenos Aires, observe crystalline deposits in the form of large fern leaves in the former condition; only cell groupings occur in the latter. Increased amount, fluidity, and transparency of the mucus and crystallization are seen in the first half of the two-phase and single-phase sexual cycles, in slight menstrual disturbances, and during treatment with estrogens. The discharge is lacking or scarce and is noncrystallizing in castrates, disorders accompanying hormonal failure, and when progesterone is acting, as at the beginning of gestation.

*J. Clin. Endocrinol. & Metabol.* 13:974-979, 1953.

*Anemia following delivery is a relatively common condition which is rarely given adequate attention.*

## Postpartum Anemia

JOHN R. WOLFF, M.D., AND MARVIN A. ROSNER, M.D.  
*University of Illinois, Chicago*

ONE out of every 5 women is anemic on the fourth postpartum day. In 1 out of 20 cases, the anemia is severe.

These figures were established by John R. Wolff, M.D., and Marvin A. Rosner, M.D., in determining the hemoglobin and erythrocyte counts for 1,000 consecutive obstetric cases in a private hospital.

Anemia as here defined means a hemoglobin below 10 gm. per cubic centimeter or an erythrocyte count below 3,500,000 per cubic centimeter. Anemia is considered severe when these values fall below 8 gm. and 3,000,000 per cubic centimeter, respectively.

For 62% of the women with anemia, no severe blood loss was reported and 95% of these patients were not anemic when starting labor. Anemia as such can only come from deficiencies in blood production, blood loss, or increased blood destruction. Previous studies indicate that blood destruction and blood production are not affected by delivery alone. This anemia without apparent cause, therefore, must result from blood loss, before, during, or after delivery.

Postpartum hemorrhage is commonly defined as the loss of 500 cc. or more of blood usually be-

cause of uterine atony, abnormal separation of the placenta, or extensive cervical lacerations. The loss of lesser amounts of blood is generally felt to be without danger.

An incidence, however, of postpartum anemia in 20% of private patients demonstrates that this concept is fallacious. The importance of each drop of blood must be recognized. Management of the third stage of labor is of the greatest importance. Immediate hemostasis should be secured and lacerated areas sutured.

The importance of anemia of pregnancy is well established. Good prenatal care should include blood studies during pregnancy and near term. If a patient is anemic, specific iron therapy should be used.

Anesthesia, as such, does not affect the production of postpartum anemia. The same percentage of anemia occurs whether local infiltration, pudendal block, low spinal, or inhalation anesthesia is used. Analgesia likewise has no causative role.

The use of a slow intravenous drip of Pitocin during labor and through the third stage does not influence the incidence of postpartum anemia.

Toxemia of pregnancy, midfor-

Postpartum anemia. *Obst. & Gynec.* 1:387-393, 1953.

## GERIATRICS

ceps delivery, and bleeding before delivery all seem to increase the incidence of postpartum anemia. Midforceps delivery, as such, should not be associated with increased bleeding in the hands of skilled operators. Every forceps delivery must be followed by an immediate inspection for lacerations. Bleeding from any deep episiotomy wounds should be controlled at once.

Blood should be crossmatched and ready for all patients with antepartum bleeding or signs of placenta previa or premature separation of the placenta.

Cesarean section is a special problem, showing a high incidence of bleeding and anemia. Blood should be available during surgery.

When obvious excessive bleeding has occurred, blood should be examined immediately without waiting for the fourth postpartum day. Appropriate therapy should begin at once.

If the patient has slight anemia, a high-protein diet and oral iron in the form of ferrous sulfate or ferrous carbonate, 15 gr. daily, are adequate. Complete blood recovery requires six to eight weeks, although patients feel well earlier.

Severe anemia should be treated with blood transfusions, at least until the hemoglobin is above 8 gm. per cubic centimeter and the red cell count is above 3,000,000 per cubic centimeter. Then diet and iron therapy should be continued.

## Primary Brain Tumors in the Aged

CHARLES RUPP, M.D., HELENA E. RIGGS, M.D., H. W. HOGAN, M.D., AND JAMES A. L. MOULTON, M.D.

BECAUSE nervous and mental failure is expected in the elderly, brain tumors are generally overlooked after the age of 60 years. Yet many lesions can be differentiated from cerebrovascular accidents, and operation may have a chance of success. Manifestations do not differ from those in younger people.

At the Philadelphia General Hospital, primary tumor appeared once in every 362 cerebral necropsies of old patients during 1935-41, and once in 150 during 1942-52. Charles Rupp, M.D., Helena E. Riggs, M.D., H. W. Hogan, M.D., and James A. L. Moulton, M.D., summarize 100 cases seen at 60 to 89 years.

About 1 of 4 persons affected dies of unrelated illness without obvious neurologic abnormality, usually with a growth less than 2.5 cm. in diameter. However, many of the patients with symptoms are stuporous when admitted, and one-third succumb in a week.

Of the space-taking lesions, more than two-thirds are gliomas, as a rule malignant, and most others are meningiomas.

Primary brain tumors in patients over age 60. *Neurology* 3:586-590, 1953.

*In most cases of cervical arthritis, conservative therapeutic measures are effective.*

## Cervical Arthritis

IRVIN STEIN, M.D.

*University of Pennsylvania, Philadelphia*

MARTIN L. BELLER, M.D., AND RAYMOND O. STEIN, M.D.

*Hahnemann Medical College, Philadelphia*

WHEN headache, neck pain, and brachialgia are presenting complaints, alterations in the cervical spine are likely.

The chief symptom of cervical arthritis, state Irvin Stein, M.D., Martin L. Beller, M.D., and Raymond O. Stein, M.D., is an aching pain in one or both shoulder regions. The sensation often extends into the supraspinatus region or laterally over the shoulder to the deltoid insertion.

The physical examination is of utmost importance, since the differentiation can be made between pain originating in the cervical spine and that starting in the shoulder region. Normally, flexion of the neck is free, permitting the chin to touch the suprasternal notch. Right and left rotational motions should allow the point of the chin to reach almost to the lateral tip of the clavicle without hunching of the shoulder.

Rotation in the limber cervical spine should reach 90°. A gradual lessening occurs with age, but anything less than 45° in an older person is definitely abnormal. Right and left bending are measured by

the deviational angle of the vertex of the skull from the sagittal plane of the body and should measure 45° on either side.

In cases of cervical arthritis, spastic muscles are hard and indurated when palpated and are diffusely tender. The spasticity lessens with traction and should not be confused with the mechanical fixation of later spondylarthritis. Distinct tender points overlying the paraspinal intervertebral joint areas may be indicative of capsulitis.

Hypertrophic arthritis of the cervical spine develops as a result of wear and tear which is usually associated with aging but which may be aggravated by repeated functional trauma. The two principal places affected are the intervertebral disks and the apophyseal or facet joints of the cervical spine. Disk degeneration ordinarily occurs with age. Marginal osteophytes of the upper and lower vertebral borders, with or without projection into the intervertebral foramina, seen on oblique radiographic views of the cervical spine, are indicative of gradual disk degeneration.

When cervical arthritis is sus-

Cervical arthritis. *J. Albert Einstein M. Center* 1:128-134, 1953.

pected, a complete radiographic examination should include the routine anteroposterior views, a lateral view in flexion and extension, and bilateral oblique films to show irregularity of the intervertebral foramina, facet arthritis, and fractures of the articular processes. The lateral roentgenograms demonstrate kinking resulting from old whip-lash injuries with tearing of the posterior apophyseal ligaments and the posterior spinal ligament in the forward flexed position.

The differential diagnosis of cervical arthritis should include tendinitis from calcium deposits in the rotator cuff of the shoulder with associated subacromial or subdeltoid bursitis, herniated or ruptured cervical intervertebral disk, cervical rib, and the scalenus anticus syndrome.

Conservative therapy is effective in most cases of cervical arthritis and disk degeneration. In acute stages, the application of halter traction gives dramatic relief by

stretching the spastic muscles and widening the intervertebral foramina, where pressure is exerted on the spinal nerves. The head end of the bed is raised so that the patient's body weight furnishes the countertraction. The traction must be continuous to overcome muscle spasm.

Local infiltration of 1% procaine into tender spastic muscular areas is also desirable in the early stages. Heat and massage are useful in the acute and chronic stages. The heat may be from an infrared lamp, histamine iontophoresis, short-wave diathermy, or radar.

In subacute and chronic stages, passive stretching of the cervical spine is important to give rotation and hyperextension movement. Patients should be taught to contract the erector nuchae muscles in order to elongate the cervical spine and widen the intervertebral foramina.

Operative therapy is indicated for selected cases only after a vigorous trial of conservative management.

## Penicillin Injection for Early Syphilis

E. W. THOMAS AND ASSOCIATES

EARLY syphilis can be effectively treated with a single injection of procaine penicillin G in oil containing 2% aluminum monostearate.

From a study of 174 patients, E. W. Thomas, M.D., C. R. Rein, M.D., S. E. Landy, M.D., and D. K. Kitchen, M.D., of New York University, New York City, observe that a single injection of 1,200,000 units of the drug provides adequate treatment in all cases of seronegative and seropositive primary syphilis. For secondary syphilis, a single injection of 2,400,000 units is used; in 87% of cases no further treatment will be needed.

Results of treatment of early syphilis with a single injection of procaine penicillin G in oil and aluminum monostearate. *Am. J. Syph., Gonorr. & Ven. Dis.* 37:374-376, 1953.

*Crippling from lower ulnar nerve paralysis may be averted by temporary denervation of the active flexor.*

## Lower Ulnar Paralysis and Deformity

JAMES A. VALONE, M.D.

*University of North Carolina, Chapel Hill*

DEFORMITY associated with paralysis of the ulnar nerve above the elbow is less than when the lesion is below the elbow.

A flail state of all muscles supplied by the nerve occurs with but slight deformity of the hand when the paralysis is above the elbow. Ulnar injury in the forearm, however, may spare the branch to the flexor digitorum profundus and cause muscular imbalance, resulting in a claw hand.

James A. Valone, M.D., suggests temporary denervation of the active flexor. Though apparently destructive, the procedure may prevent crippling fibrosis of joints or actual loss of a finger.

A damaged ulnar nerve may be repaired by suture alone or followed by tendon transfer, but muscles, joints, and soft tissues must remain pliable.

Ulnar paralysis is more frequent and results of suture are less gratifying than in any other peripheral nerve. Muscles with ulnar innervation are older phylogenetically and more highly coordinated than others with peripheral supply. The nerve bears different types of fibers, and distal function involves small, highly specialized muscles for fine movements of the hand.

Paralysis of the ulnar nerve and management of its deformity. *J. Neurosurg.* 10:138-144, 1953.

Paralysis below the elbow may cause severe so-called typewriter deformity, with the metacarpophalangeal joints of little and ring fingers hyperextended and the interphalangeal joints flexed. Several factors are responsible.

Interosseus and lumbrical muscles, which normally flex the metacarpophalangeal joint and extend interphalangeal joints, are now helpless. The dorsal extensor apparatus of the metacarpophalangeal joint is pulled upward by the unopposed active extensor muscle.

The extended position is maintained through steady flexion of distal phalanges by the flexor digitorum profundus. Owing to the uneven muscular pull, digits 4 and 5 are soon deformed, especially the little finger.

The ordinary type of splint, by immobilizing the fourth and fifth digits in flexion, probably limits motion and increases deformity still further. When the metacarpophalangeal joint is extended, collateral ligaments loosen and permit side-ward motion; but when the joint is fully flexed, ligaments are drawn tight, preventing abduction and adduction.

The ugly typewriter deformity does not occur with nerve injury

in the upper arm, since the flexor digitorum profundus is paralyzed. The palm is cupped as interosseus muscles atrophy, but no tension is exerted on the metacarpophalangeal joint capsule. Fingers can be extended completely or flexed into a good fist.

With low ulnar paralysis, the metacarpophalangeal joint may be so stiffened by capsular fibrosis that the little finger must be amputated with the metacarpal head. Function is lost in spite of routine physical therapy.

The deep flexor muscle should be

paralyzed temporarily by blocking the nerve supply 10 or 12 cm. above the myoneural junction. Innervation to the deep flexor is dissected free from the main nerve trunk, and fibers are crushed, much as a phrenic nerve is interrupted.

Deformity of the fourth and fifth fingers will be held off until balance can be restored by activation of the distal interosseus and lumbrical muscles.

Even if deep flexor paralysis should be permanent, an unlikely result, ability to clench the hand would not be lost.

## Cortisone Therapy for Bell's Palsy

HAROLD H. ROTHENDLER, M.D.

NERVE function may be restored rapidly in cases of Bell's palsy if cortisone is given soon after onset.

After approximately two weeks of continuous cortisone treatment, 6 of 7 patients recovered completely, reports Harold H. Rothendler, M.D., of the Hospital for Joint Diseases, New York City. Initial daily dosage, given in divided amounts, was 400 to 600 mg. intramuscularly or 300 to 500 mg. orally. Quantities were gradually reduced. The hormone was started in the successful cases one to nine days after the patient first noted facial palsy and improvement was sometimes seen in a day or so, especially when therapy was begun soon after appearance of the lesion. Failure occurred in a case in which treatment was delayed for ten days.

In the ordinary untreated case, recovery is not evident for four to six weeks or longer; residual nerve atrophy with paralysis may occur in patients showing no improvement. The prompt response with cortisone may be due to the ability of the hormone to relieve the acute inflammatory edema of the facial nerve and sheath, thus reducing the compression of the facial nerve fibers passing through the bony portion of the fallopian aqueduct and restoring normal nerve function. Therefore, cortisone is not likely to be beneficial when nerve atrophy has already occurred.

Bell's palsy treated with cortisone. *Am. J. M. Sc.* 225:358-361, 1953.

*When surgery is no longer feasible for cancer of the prostate without metastases, radioactive gold is advisable.*

## Radioactive Gold for Prostatic Cancer

H. DABNEY KERR, M.D., R. H. FLOCKS, M.D.,  
H. B. ELKINS, M.D., AND DAVID CULP, M.D.  
*State University of Iowa, Iowa City*

INJECTION of radioactive gold is recommended for treatment of carcinoma of the prostate when the lesion has extended beyond the capsule but is still confined within the pelvis.

The cure rate with carcinoma of the prostate is low because the tumor is silent and produces symptoms of urinary obstruction or pain relatively late. At least 3,000,000 men in this country have the lesion, which appears in 21% of postmortem examinations of men over the age of 40.

H. Dabney Kerr, M.D., R. H. Flocks, M.D., H. B. Elkins, M.D., and David Culp, M.D., report that after therapy with  $Au^{198}$ , about 98% of 129 prostatic cancers showed rapid and prompt decrease in size. Although most of the lesions had no distant metastases, radical surgery had not been deemed advisable because the tumors had extended beyond the capsules.

Before radioactive gold therapy is instituted, roentgen examinations and phosphatase determinations are made to be certain the patient does not have metastases.

To perform the injection, a standard retropubic approach is

made to the prostate. Palpation of the prostate through the unopened bladder and also of the pelvis helps determine extent and size of the tumor. Bleeding is controlled and the bladder is opened.

A suprapubic catheter is placed in the bladder and carried to the exterior through a stab wound above the original incision. The operating team completes all possible operative procedures and leaves the vicinity of the patient before the gold is injected.

Close collaboration between the urologist and a radiologist well versed in isotope therapy must be assumed. The radiologist measures the amount of radioactivity desired and dilutes the material to the proper total volume. Proper distribution and correct dosage are decided before injection is begun.

The urologist makes the injection. Usually from 8 to 16 cc. of the diluted material is injected into the prostate from within the bladder. The periprostatic region and the seminal vesicles are infiltrated transvesically and extravesically. Any palpable nodes are also injected.

Then the bladder and incision

The treatment of moderately advanced carcinoma of the prostate with radioactive gold. *Am. J. Roentgenol.* 69:969-977, 1953.

## RADIOLOGY

are closed as rapidly as consistent with good surgical technic. A retention catheter is passed through the urethra.

A moderate-sized prostate, between 30 and 60 gm., is probably best treated with a millicurie per gram ratio of 2 to 1. Each seminal vesicle receives between 5 and 10 millicuries, depending on the extent of the disease. A mixture of normal saline, hyaluronidase, and epinephrine is employed as the diluent.

Because the main radiation component of  $\text{Au}^{198}$  consists of beta rays, the isotope can be confined relatively easily, thus preventing damage to adjacent structures. Two gamma rays of 0.12 and 0.41 mev.

make the total radiation more uniform. The half-life is 2.7 days.

For protection, the radioactive material is surrounded with lead barriers when possible. Radiologist, surgeons, nurses, patient, sponges, and drapes are carefully monitored. The first urine is monitored for safety before being discarded.

Complications are confined almost entirely to the rectum. Tenesmus, bleeding, stricture, and ulcers may occur. Rectal difficulty developed in 3 of the last 67 cases.

Of 50 patients studied in detail and observed for six to seventeen months, 27 are alive without, and 8 with evidence of the disease. At death the cancer was found in 8 and not found in 7 patients.

## Vanishing Tumor of the Lung

WILLIAM WEISS, M.D., KATHARINE R. BOUCOT, M.D.,  
AND WILLIAM I. GEFTER, M.D.

LOCALIZED interlobar effusion due to congestive heart failure may be mistakenly diagnosed from the roentgenogram as neoplasm, tuberculosis, pneumonia, bronchiectasis, infarction, or other pulmonary disease of far greater prognostic gravity. Vigorous treatment of the cardiac failure is the therapy, and diagnosis is confirmed by the disappearance of the lesion during such therapy.

The condition is rare, the incidence being 0.22% among a large number of photofluorograms made at the Philadelphia General Hospital.

Vanishing tumor may be suspected, state William Weiss, M.D., Katharine R. Boucot, M.D., and William I. Gefter, M.D., when the roentgenogram shows an enlarged heart or abnormal cardiac silhouette and a density in the region of one or more of the interlobar fissures, especially on the right. Lateral chest films facilitate prompt recognition by helping to determine whether a collection of fluid is in the plane of a fissure.

Localized interlobar effusion in congestive heart failure. *Ann. Int. Med.* 38:1177-1186, 1953.

## Special Article

### Modern Prenatal Instructions

LEONARD H. BISKIND, M.D.\*

*Mount Sinai Hospital, Cleveland*

*Prepared for Modern Medicine*

THE most significant advance in the practice of obstetrics in the past twenty-five years has been the improvement in prenatal care. Not only are pregnant women seen and examined more frequently, but they receive far more explanatory instructions from their attending physicians.

For the first time in history, the maternal mortality in this country has been reduced to slightly less than 1 maternal death per 1,000 live births. Health education and good prenatal care by competent physicians account for this magnificent reduction. Childbearing has been made safer than ever before. This is particularly significant since for the past six years the number of births in the United States has exceeded 3,500,000 annually, with an estimated all-time high of almost 3,900,000 in 1952.

Labor and delivery are the normal end results of pregnancy. They should be approached without fear or anxiety. Improvements in obstetric knowledge, skill, and technic during the past quarter of a century, particularly in prenatal care, bring the prospective mother to labor and delivery in a far better physical condition than ever before. An improvement in the emotional approach to labor and delivery is likewise essential. Therefore, thorough understanding of what is about to happen is advisable.

Modern prenatal instructions should be clear, concise, and helpful in answering all the questions that may arise in the course of a pregnancy. The following instructions, taken from the author's book, *Having Your Baby*,† cover the essential aspects of prenatal care.

This outline is intended to disseminate pertinent obstetric information to obstetric patients. Each patient is asked to read these instructions immediately after the first office visit and to refer to them repeatedly throughout her pregnancy.

\*Division of Obstetrics and Gynecology, Mount Sinai Hospital, Cleveland.

†Random House, New York City, 2d edition, 1951.

## SPECIAL ARTICLE

### **Instructions for Pregnant Women**

#### INTRODUCTION

Having a baby is a normal physiologic process that almost all women undergo. In the hands of a competent obstetrician, your pregnancy, labor, and delivery should be normal and as free from difficulties as possible, particularly if you cooperate fully with your doctor.

There are, in general, certain principles you must observe during pregnancy which have been set down here for your welfare. Adherence to these principles will mean that you are doing your utmost to give your baby a good start in life and at the same time keep yourself in the very best of health. In most instances, with proper prenatal care, a well-regulated pregnancy is the happiest and healthiest period of a woman's life. Prospective mothers such as you should recognize the value of their prenatal health and preserve it. This can be done by *obeying your doctor's instructions*.

#### OFFICE VISITS

1] Go to see your obstetrician early, preferably not later than the second month of pregnancy. This is essential in order that you may receive good care from the onset of pregnancy and that your physician may reserve a hospital bed for you. Because of the shortage of hospital beds for maternity patients in many parts of the country, reservations must be entered as early as possible.

2] At your first visit, your physician will obtain the pertinent facts of your history. He will want to know your name, age, address, and telephone number; your husband's name, age, and employment; your marital and menstrual history, including the date of your last menstrual period and its duration; the number of children you have had and some definite data in regard to previous labors and deliveries; your previous illnesses including operations, if any; the health of your family and that of your husband; and, finally, your present symptoms.

3] Upon the completion of this data your obstetrician will examine you to determine whether you are pregnant and the extent of the pregnancy. This is done by a vaginal examination which gives your physician a certain amount of vital information in regard to your female organs, pelvis, and associated areas.

4] Your due date will be estimated. Remember that this date is merely an estimate and cannot be accurately determined. It is calculated by adding ten to fourteen days to the first day of the last menstrual period and subtracting three months. The actual date your baby is born is dependent upon a variety of factors, often beyond your control and that of your physician, and it may vary two weeks or more either way from the date estimated.

5] It is important for you to remember the first day of your last menstrual period, not only so that your physician may estimate the

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expected date of your confinement, but also so that you may calculate ahead on a calendar the dates of your expected menses each month for the entire pregnancy. Keep the calendar showing these dates handy, so that you can refer to it. As explained later, you are told to avoid marital relations, travel, and excessive work and physical activity, including sports of any kind, on the days of each month you might have been menstruating were you not pregnant. With a knowledge of these dates you may avoid the loss of your pregnancy by refraining from activities at such times.

6] Prenatal care consists of regular visits to your obstetrician's office at definite intervals. These visits are usually made every three weeks during the first six months; every two weeks in the seventh and eighth months; and weekly during the last month. Your weight, blood pressure, and urinalysis are recorded at each visit. Some obstetricians ask their patients to bring a 2-oz. specimen of freshly voided urine at each office visit. Other physicians prefer to have the patient come prepared to void a specimen at the office.

7] It is a good idea to make a notation of any questions or problems that you may have and bring such a memorandum with you each time. In this way you will not overlook any important matters such as signs of trouble.

8] Beginning with your sixth month of pregnancy, in addition to the regular check of your weight, blood pressure, and urine, the abdomen is examined at each visit.

This consists of determining the height of the growing womb, the size and position of the baby, and the location and quality of the baby's heart rate. During the first six months of pregnancy, the womb enlarges in size. At the end of the sixth month this process stops and is replaced by a stretching of the womb with an actual thinning out of the uterine walls to accommodate the growing fetus and bag of waters.

9] During the ninth month, one or more rectal examinations may be made. These are of considerable value in determining the position of your baby before labor and delivery.

10] When advisable, a roentgenogram of the abdomen and pelvis is made during the ninth month. This is routine for a woman who is having her first baby and serves to acquaint the physician with the size and position of the baby in relation to the pelvis. This information is often very valuable in determining whether surgical procedures may be necessary for delivery.

11] When necessary, patients are seen oftener than the prescribed visits. Sufficient time is allowed for each prenatal visit, not only for the examination, but for a discussion of any problem you may have at any time during your pregnancy. Do not hesitate to discuss your obstetric problems with your physician. On the other hand, please respect his time, realizing that he has other patients to attend and other duties to perform.

12] Many large cities, like Cleve-

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land, have prenatal classes such as the ones sponsored by the Visiting Nurse Association and the Academy of Medicine. These classes are held in various institutions throughout the city, usually once a week. Prenatal instruction and advice on the care of the newborn are given by qualified teachers. If you desire to attend these classes, inform your obstetrician.

13] Other prenatal classes are held by the department of obstetrics of individual hospitals, particularly in large cities. Many of these classes use movies as well as the excellent pelvic models constructed by the late Dr. Robert L. Dickinson. Health museums throughout the country have a series of these models on display and every pregnant woman should see them.

### PHYSICAL EXAMINATION

1] Your second office visit is given over entirely to a *complete* physical examination, including pelvic measurements. Particular attention will be paid to signs of nutritional deficiency. You will do well to tell your obstetrician of your past illnesses, particularly such conditions as the infectious diseases of childhood and adolescence in which complications occurred.

2] If definite pathology is found at this examination, you will be referred to an internist for further investigation and treatment, if necessary.

3] Under certain conditions, patients with constitutional diseases, such as heart disease, syphilis, tuberculosis, or diabetes, may have children. But, in order to do so,

the greater majority of patients should be under the care of a competent internist as well as an obstetrician. When a serious constitutional disease exists in a pregnant woman, it is most essential to treat the illness and disregard the pregnancy.

4] Before becoming pregnant, women who have or have had a serious medical condition or a mental illness should consult a reputable internist and, subsequently, a competent obstetrician.

### BLOOD PRESSURE

1] During your first and all subsequent office visits, your blood pressure will be taken. This is done by placing a flat rubber bag around your upper arm, attaching it by means of rubber tubing to a manometer, inflating the bag, and listening to the sound of your pulse in the stethoscope while watching the meter. Every woman has her own normal pressure which, under ordinary circumstances, is not particularly affected by being pregnant.

2] There is, however, a condition known as toxemia that affects some women during the latter months of pregnancy. This is a poisoning which may have serious consequences. The condition consists of a triad of symptoms—a rapid, large gain in weight, elevation of the blood pressure above normal, and albumin in the urine.

3] For this reason, it is imperative that you make regular visits to your obstetrician and that he make a check of your blood pressure, urine, and weight at each visit.

URINALYSIS

1] Urinalysis consists of determining the presence or absence of albumin, sugar, casts, and pus cells. Normally, your urine should have none of these substances.

2] If albumin is present, it may, together with a rise in blood pressure, indicate the presence of toxemia. Toxemia, when discovered early, can often be cured and the patient be spared the dangers of the development of a more serious condition known as eclampsia, which affects not only the child but the mother as well.

3] The presence of sugar in the urine of pregnant women does not always indicate diabetes. Often it merely represents the presence of a milk sugar which is associated with lactation. It is important for your physician to check for sugar and the type present.

4] Casts and pus cells in the urine may be the signs of one of several types of kidney disease or may result from a vaginal infection. It is well that the source of such substances be determined by your obstetrician.

5] Again, you are reminded of the necessity for urinalysis at each prenatal visit.

YOUR MIND

1] If this is your first pregnancy, remember that millions of women have had babies without difficulty since the world began. In the great majority of cases there is nothing to fear about pregnancy, labor, or delivery.

2] Do not be misled by well-meaning friends and relatives who

will tell you about unusual and troublesome pregnancies they experienced or know about. It is a common human failing to exaggerate such stories in order to impress people.

3] Competent obstetric care given to a fully cooperative patient produces excellent results in almost all cases. Competent care can avoid many of the problems in pregnancy encountered by patients years ago, when prenatal visits to a physician were made only if abnormal symptoms appeared. In those days there was little or none of the modern knowledge and equipment with which to combat the occasional serious development. The expectant mother of today needs to appreciate more clearly the really great progress that has been made in the management of complicated childbirth in the past fifty years.

4] In this modern age you have the right to expect at least such basic prenatal care as is outlined in this discussion. Anything less does not meet the standards of the American Committee on Maternal Welfare.

5] Having chosen a competent obstetrician, not only must you be cooperative, but you must have faith in his ability and judgment. While qualified to give you excellent obstetric care, he is not a miracle man and cannot accomplish the best results without your complete cooperation.

6] Since many pregnancies are not planned and some are not desired, it is important that you adjust yourself emotionally to your new status, not only for your own

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sake but also for the sake of your baby. Many pregnant women who have had one or more children tend to develop an attitude of martyrdom toward the work and responsibilities of added pregnancies.

7] As soon as you become aware of the probability of being pregnant, start to study the advantages and compensations as against the temporary inconveniences. Pregnancy and subsequent parenthood are two of the fundamental responsibilities of marriage which, if accepted realistically, can lead to untold happiness.

8] In most instances, the chief factor in the unwillingness to have a baby is economic. The patient and her husband worry over their ability to care for the expected child and to provide education and other facilities for it.

9] Another, though less common, cause for the rejection of a pregnancy is the attitude of the husband who, for one reason or another, may wish to delay acquiring a family.

10] However, the greatest source of rejection toward a pregnancy is stimulated by attitudes developed early in childhood, chiefly the attitude of selfishness.

11] Rejection of a pregnancy, no matter for what cause, often reveals itself as a sense of disgust at being pregnant, manifested in the so-called morning sickness.

12] It is worth repeating that pregnancy is a normal function of all women. If you cooperate fully with your physician, it can be a period of utmost satisfaction and tranquility.

13] You must have complete trust and confidence in your obstetrician. He must be able to inspire confidence by his manner, ability, and knowledge. On the other hand you must carry out his instructions to the letter and avoid needless worry. Avoid, above all, having your friends and relatives tell you how to conduct your pregnancy. Too often this form of "bridge table obstetrics" creates doubt and confusion in the patient's mind.

14] Keep your mind at ease. Keep up with daily events and world affairs. Maintain your normal interests. Don't feel sorry for yourself.

### WATCH YOUR WEIGHT

1] Generally speaking, women who follow a proper diet have fewer miscarriages, premature labors, stillbirths, and complications during pregnancy and labor and have babies with less congenital defects than do women who do not have a proper diet during that period. A diet containing the essential foods and vitamins in adequate quantities will often prevent anemia during pregnancy and nursing and such complications as infection and toxemia.

2] Most physicians practicing obstetrics now agree that weight gain throughout the nine months of pregnancy should never exceed 20 lb. Patients gaining more than this amount must be closely watched for signs of impending trouble. The control of weight, therefore, is another important reason for making regular visits to your obstetrician.

3] Rapid and excessive weight gain during pregnancy is dangerous. A type of poisoning occurs during pregnancy, known as toxemia, which may spring up overnight, so to speak. Some of the earliest signs of toxemia are rapid and excessive gain in weight, rise in blood pressure, disturbances of vision, and albumin in the urine. When present, toxemia may be really dangerous to the life of your baby and, in the severe form, equally dangerous to you.

4] Large babies with large heads and shoulders may be responsible for long labors and difficult deliveries, even with the best of obstetric care. On the contrary, mothers with small babies usually have shorter labors and easier deliveries with less chance of being "torn in childbirth."

5] While it is true that nature determines the size of your baby based on the physical structure of your husband and yourself, it is equally true that, with proper yet adequate diet, you can prevent your baby from being overly large. Pediatricians tell us that average-sized babies (6½ to 7½ lb.) do just as well after birth as the larger infants.

6] Often patients will say that they cannot stop eating. They have to "nibble something all day long." This desire to eat all the time is not due directly to pregnancy but has an emotional background. This problem, which is closely associated with personality and character, should be fully discussed with the physician.

7] Eating is often motivated by

psychologic factors. The urge to eat frequently is merely the gratification of the need for pleasure as a relief from emotional tension. This leads to an overindulgence in unnecessary food with a caloric intake far beyond the needs of the specific individual. Since it is a well-known fact that obesity materially shortens the span of life, you should learn to exercise care and judgment in the selection of the type and amount of your daily caloric intake.

8] Proper dieting will prevent overweight for both you and your baby. It is possible, by strict adherence to your obstetrician's orders, to keep your baby down to the normal weight and, at the same time, avoid putting on any excess weight yourself. This can lead to a safe and comparatively easy delivery with an excellent possibility that you can regain your normal figure within a few weeks afterward. *Watch your weight.*

#### DIET

1] It has long been known that American women, whether pregnant or not, eat excessive amounts of refined carbohydrate foods (sugars and starches). This has led to a very high incidence of obesity in the adult female population and has created a serious and pressing medical problem. Unless special care is taken, your diet may not meet the combined demands of your own body and those of the growing baby. Numerous studies made in many localities in the last few years have shown that all but a very few pregnant women have

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seriously inadequate diets. Experts in nutrition agree that pregnant women should have a high-protein, low-carbohydrate diet with sufficient calories to meet the needs of the individual.

2] Such a diet must also contain proper amounts of the various vitamins, particularly the B complex. The caloric content must never be such as to permit a weight gain of more than 20 lb. throughout the nine months of pregnancy.

3] *Foods to be eliminated:* Pastries (cakes, pies, cookies, and so forth). White bread and other foods made from white flour such as spaghetti, macaroni, noodles, and dumplings. Candies, soft drinks, and other foods rich in sugar. Alcoholic beverages—alcohol, like sugar, also provides vitamin-free calories. Curtail the use of sugar so that you never use more than 1 level tsp. at any time in any given thing. Cane or beet sugar is so highly refined as to be virtually chemically pure and is entirely freed of vitamins. However, a certain amount of the B vitamins is required to convert this sugar into energy. Most natural (unrefined) foods contain enough of these vitamins to take care of their own calories. Not so with sugar, which, in effect, must borrow from the rest of diet, which itself is likely to be deficient.

### 4] *Sample diet:*

8 A.M. Breakfast: 1 egg any style. 2 strips of bacon. 8 oz. of orange juice, preferably fresh. Frozen orange juice may be used. 1 cup of coffee with cream. 1 level tsp. of sugar for the coffee, if

desired. 1 slice of whole-wheat or rye bread with butter. The bread may be, but preferably is not, toasted; toasting destroys the vitamin content of bread. On alternate days, if desired, cooked cereal such as oatmeal may be substituted for the bacon and egg.

10 A.M. 1 glass of milk

12 NOON Lunch: A moderately large bowl of green salad made up chiefly of fresh vegetables such as lettuce, tomatoes, celery, cucumbers, radishes, cabbage, endive, and escarole. This salad may be garnished with protein food such as strips of meat or fowl, pieces of cheese, sliced hardboiled egg, or a scoop of cottage cheese. The dressing should be simple, preferably lemon or vinegar. Do not use prepared dressings that contain mineral oil. 1 slice of whole wheat or rye bread with butter. 1 glass of milk. A simple dessert such as Jello, custard, or fresh fruit salad. If available, 1 or 2 slices of beef or calf's liver, prepared in any style, may be added to this meal two or three times a week.

4 P.M. 1 glass of milk

6 P.M. Dinner: 1 average helping of meat, fish, or fowl prepared as desired. An average helping each of 2 cooked vegetables, with a minimum of potatoes. 1 average helping of a fresh vegetable in the form of salad; this may be cole slaw, sliced tomatoes, chef salad, or head lettuce with a simple dressing. 1 slice of whole-wheat or rye bread with butter.

1 cup of coffee if it does not cause wakefulness, with a level teaspoonful of sugar, if desired. The dessert should be Jello or a similar product, custard, or fresh fruit salad.

10 P.M. 1 glass of milk

5] This diet may be modified by your physician. If you are overweight at the onset of pregnancy, the total caloric value may be reduced. If you are underweight, you may be permitted an increase. Should the diet be increased under your physician's instructions, it is preferable that the proportions of the various foods be maintained approximately as indicated in the sample menu above.

6] No one diet can apply equally to all patients. The type of diet depends upon many factors, including the patient's nutritional status, tendency to obesity, physical activity during pregnancy, and the emotional make-up.

7] Certain illnesses during pregnancy require changes in the diet. Should this be necessary in your case, these changes will be discussed with you. For example, it sometimes becomes necessary to restrict the amount of salt consumed, particularly if the patient has kidney disease.

8] While fresh fruit is valuable from the standpoint of vitamin content, particularly vitamin C in citrus fruits, and in some individuals is helpful in aiding regularity in bowel activity, excess amounts will add to your weight, since fruits contain sugar.

9] Should you be unable to drink milk because of an allergy, an ac-

ceptable form of calcium will be prescribed. If you drink a quart of milk daily as outlined in the above diet, added calcium will be unnecessary.

10] Water serves many functions in the body. The total amount of liquid intake including water should approximate 8 to 10 glasses daily. In this respect you should remember that there is a definite relationship between the amount of salt eaten in your diet and the amount of water retained by the body. The greater your salt intake the more you will weigh, since the water you drink will be retained rather than excreted. Many physicians urge their patients to curtail the use of salt throughout pregnancy. They believe that limitation of salt curtails the weight, reduces the likelihood of toxemia, and contributes to a more rapid and easier labor. *Watch your salt intake.*

11] *Do not eat between meals* except as indicated in the diet. If in doubt, consult your obstetrician.

12] *A word of caution:* In view of the fact that almost all fruits and vegetables are sprayed with insecticides, such foods should be thoroughly washed and, when possible, peeled before cooking and eating.

#### VITAMINS

1] Vitamins are an essential part of the diet and are of particular value to pregnant women.

2] Not only are these substances necessary to care for the increased metabolic needs of pregnancy, but there is evidence that an adequate intake of *all* the vitamins reduces

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complications during pregnancy and encourages an easier delivery and better health for the baby. Certain vitamins are essential for the normal development of the baby during pregnancy.

3] Because the average diet is often inadequate for the vitamin needs of a nonpregnant woman, much less the increased requirements of pregnancy, additional amounts of the essential vitamins, especially those of the B complex, must be taken as a *supplement* to the diet throughout pregnancy and the nursing period that will follow.

4] Failure to take an adequate amount of these nutritional factors may lead, among other things, to impairment of certain functions of the liver. This, in turn, affects other organs. In pregnant women, excessive bleeding may occur as a result, at or after delivery, and the uterus may not return to normal size as rapidly as it should after delivery. Later other complications may develop, such as painful, lumpy breasts, premenstrual nervousness, and excessive menstrual flow.

5] The likelihood that any of these complications will occur is greatly reduced by an adequate supplement of the entire vitamin B complex throughout pregnancy and immediately thereafter. If the baby is breast fed, continuation of the B vitamins throughout the nursing period is desirable. To assure that all the necessary vitamins are present, the preparation prescribed for you is derived from the best natural source—liver—fortified with

additional amounts of the known vitamins.

6] Do not be misled by radio and newspaper advertising about the allegedly small daily need for vitamins in human nutrition. Often this need is underestimated and physicians prescribe inadequate amounts. To be of any real value in human physiology, all vitamins and particularly the B complex must be taken in adequate quantities.

7] Since the daily use of vitamins aids materially in the digestion and absorption of all types of food, thereby utilizing the food to fullest extent, patients can get along very well during pregnancy on a smaller caloric intake.

8] Vitamins are best taken during or just at the end of each meal—three times daily.

### BLOOD TESTS

1] Regardless of what city or state you may live in, or the requirements by law in regard to blood tests for pregnant women, it is your right to expect your physician to arrange for a syphilis test at your first visit to him. The state law of Ohio was amended in September 1945 to make it mandatory for every physician practicing obstetrics to have every pregnant woman's blood tested for syphilis. At the time of a first office visit in Ohio a pregnant woman is given a form in duplicate referring her to a designated acceptable hospital laboratory where blood will be drawn from her arm and this test performed.

2] In addition, a count will be

made of blood cells and a determination made of the oxygen-carrying capacity of the red blood cells.

3] If the blood test for syphilis is positive and repeated tests confirm this finding, intensive treatment must be instituted at once and maintained throughout pregnancy to prevent your baby from being born with this disease.

4] In pregnancy, the red blood count tends to be low. This is spoken of as the anemia of pregnancy. If the red cell count in your case is low, proper and adequate treatment will be instituted. In most instances this will be in the form of a simple iron preparation.

5] Pregnant women should not be donors in blood transfusions at any time during pregnancy or the nursing period thereafter.

#### THE RH FACTOR

1] In recent years a good deal of publicity has been given to an important subject, the Rh factor. It is becoming a matter of routine, along with the blood test for syphilis, for obstetricians to arrange for a check of the Rh factor of every pregnant patient at her first office visit.

2] The Rh factor is a substance present in the blood of 85% of all people. When present, the individuals are said to be Rh positive. When the factor is absent, these individuals are said to be Rh negative.

3] For your information and that of your husband, the relation of the Rh factor to pregnancy is as follows:

- If both parents are Rh positive,

disturbance in the first or subsequent babies is rare.

- If both parents are Rh negative, disturbance of this sort never occurs in the infants.
- If the father is Rh negative and the mother is Rh positive, the babies are never affected.
- If the mother is Rh negative and the father is Rh positive, an unfavorable reaction may produce erythroblastosis fetalis, a disease in which the baby becomes jaundiced and swollen and may die. This rarely occurs in first pregnancies and often not in subsequent pregnancies unless for some reason or other you received a previous transfusion of Rh-positive blood.

4] Only 1 woman in 25 to 50 with Rh-negative blood, whose husband is Rh positive, becomes sensitive to Rh-positive blood when pregnant with an Rh-positive baby and gives birth to an infant with erythroblastosis. Even if this should occur, a method has been developed for early transfusions of such a baby. This is called exchange transfusion, in which 85% of the infant's blood is replaced, usually through a vein of the umbilical cord, within twenty-four to forty-eight hours after birth. Most large hospitals with good maternity divisions are equipped to do this procedure.

#### CARE OF BOWELS

1] Many women tend to be constipated. If the following simple rules are adhered to, the majority of patients will have no difficulty with bowel movement during pregnancy.

2] Establish the habit of moving your bowels twice daily, in the morning upon arising or after

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breakfast and at night after dinner or upon retiring. The use of an intestinal lubricant is helpful. Pure mineral oil has been found unacceptable in the treatment of constipation since the oil coats the walls of the intestines, thereby preventing the absorption of all the vitamins. A good, plain, emulsified mineral oil preparation is preferable. A tablespoon of such a preparation should be taken every night upon retiring. These preparations are much more palatable when cold and therefore should be kept in the refrigerator.

3] It must be remembered that a lubricant will not initiate bowel movement. It serves only to soften the stool so that you may avoid straining. Occasionally, stimulation of the lower bowel may be necessary. This can be done with a glycerin suppository until the bowel is trained to regular periodic elimination.

4] Cathartics, laxatives, and enemas should not be used because there is some danger of inducing premature labor thereby. If constipation persists after a good trial of attempting to develop habit time, discuss the matter with your obstetrician. Do not take cathartics, laxatives, or enemas on your own initiative.

5] Occasionally nervousness and worry produce a spasm of the bowel and resultant constipation. This usually subsides as soon as the patient is able to control her "nerves."

6] Proper cleansing of the rectal and urethral areas is extremely important for obstetric patients. After

a bowel movement the rectum must be cleansed from the side and never by a forward upswing motion between the thighs. Following urination the vaginal outlet should be dried by absorption as in the use of a blotter.

7] At times, diarrhea occurs with frequent watery bowel movements. Report this symptom to your physician at once and do not resort to home remedies.

8] Many pregnant women seek relief from gas, particularly from the associated bloating effect. This condition is caused by gas-producing foods such as beans, onions, and roughage. Some foods produce an allergic reaction with gas formation. These are cabbage, raw apples, radishes, cucumbers, milk, chocolate, coffee, peanuts, and eggs. Through the process of elimination, the offending food or foods may be discovered and removed from the diet, if necessary.

### CARE OF KIDNEYS

1] During pregnancy, certain serious disturbances of the kidneys may arise. Often such disturbance is caused by the increased load the kidneys have to bear, not only in the removal of your waste products, but those of your baby as well.

2] Women with a definite history of kidney trouble should not become pregnant without having a thorough physical examination by a competent internist and a subsequent examination by an obstetrician. In this way, a proper decision can be made as to whether pregnancy can be carried to term with-

out endangering the immediate and future health of the patient.

3] It is extremely important that a specimen of urine be examined by your obstetrician at each prenatal visit. It is of equal importance that he check your blood pressure at the same time.

4] If you drink 8 to 10 glasses of liquids, including water, daily, you should void at least 3 pt. of urine each day. If less than this amount is passed, your physician should be informed. Patients taking adequate quantities of vitamin B complex will void urine of a deep golden-yellow color.

5] Swellings of the feet, ankles, hands, or face; persistent or recurrent headaches; or disturbances of vision are frequently the first indications of some kidney disturbances. When present, such symptoms should be reported to your obstetrician at once.

6] Frequency or burning at urination may be a sign of an infection or inflammation in the bladder or the kidneys. If reported to your physician early, such conditions may be treated and serious complications avoided.

#### CARE OF BREASTS

1] As pregnancy progresses, the breasts enlarge. During the latter months a small amount of milk-colored secretion comes from the nipples. This has a tendency to cake and form scales and may be removed by washing with soap and water.

2] A good brassiere should be worn which elevates and supports the breasts but does not compress

them. Proper support throughout pregnancy will prevent excessive stretching of the tissues from the increased weight and size of the breasts. Nursing causes certain changes in the breasts which tend to make them pendulous and flabby. This condition can be avoided to a good extent by wearing a well-fitted breast support during the entire nursing period.

3] Some obstetricians suggest that the nipples be covered daily with such preparations as cocoa butter, cold cream, or lanolin. It is not considered safe to use astringents, such as alcohol, for the purpose of hardening the nipples. This practice often causes the formation of cracks which become a source of infection, and breast abscess develops.

4] If flat or inverted, the nipples should be massaged. Grasp the nipple between the thumb and first and second fingers and pull the nipple out in a slow firm motion. Repeat this for a period of five minutes several times daily. The use of a good baby oil facilitates the maneuver. If the nipples remain inverted, it will be extremely difficult for your baby to nurse.

5] Please report such symptoms as unusual lumps or lumpiness or localized pain in the breasts to your obstetrician.

6] Remember that 9 out of 10 women can nurse their babies if they really want to. Your own positive attitude toward breast nursing will aid in stimulating the formation of breast milk. Breast nursing combines the satisfaction of giving the baby the best nourishment with

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a feeling of emotional security and of being loved, gained from close contact with its mother.

### CARE OF TEETH

1] As soon as you definitely know that you are pregnant, it is advisable for you to see your dentist. Minor cavities may be filled and your teeth cleaned. However, your dentist should not be permitted to do any more than is absolutely essential without first consulting your obstetrician. Long dental procedures causing pain and discomfort may disturb the pregnancy.

2] Carbohydrate foods such as sugars (candy, etc.) are apparently one of the major causes of tooth decay. Therefore, it is to your advantage, whenever possible, to brush your teeth immediately after partaking of any type of food, no matter how often.

3] There is a popular misconception in regard to the relationship of calcium intake and dental decay. Adequate calcium is, of course, essential for the proper growth and bone development of your baby. During pregnancy, this quantity is supplied by the diet outlined in these instructions. Calcium taken to excess increases the hardness of the baby's bones, including those of the head. Hard heads may lead to obstetric difficulties at the time of labor and delivery.

4] It is preferable that you drink a certain amount of milk daily, since it not only supplies calcium but other food elements as well. Calcium in tablet, wafer, or capsule form supplies none of the food elements found in milk.

5] Individuals with poor teeth which decay easily may find that pregnancy will aggravate this condition in spite of an apparently adequate intake of food and calcium. Constant dental care is advisable in such cases.

6] A few patients complain of a foul taste in the mouth during pregnancy. In most instances, this is caused by dental decay and can be prevented by good dental care. Occasionally no cause can be found and once in a great while the source may be emotional. A good mouth wash used several times daily gives adequate relief.

7] In having dental work done, avoid the days in the month when you would be menstruating if you were not pregnant. Extraction of a tooth preferably should be done under local anesthesia. This, too, must not be done during the days when you might have been menstruating.

8] Please remember that pregnancy itself does not cause tooth decay. You can maintain a healthy mouth condition with sound teeth and good gums if you will follow the advice of a competent dentist in regard to oral hygiene and care of your teeth.

9] If during early pregnancy you have vomiting spells, rinse your mouth with a good mouth wash.

10] Good oral hygiene, dental care, and a proper, adequate diet, as outlined in these instructions, will give you the best dental health possible in any individual case, together with a good foundation for your child's teeth and gums.

11] In certain parts of the coun-

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try considerable agitation has arisen in regard to the addition of fluoride to drinking water to prevent tooth decay. The value of fluoride in this regard has not been completely and thoroughly settled. However, there is no evidence that fluoride taken during pregnancy will cause the expected infant to have better permanent teeth. The buds of the permanent teeth are not even formed at the time of birth; consequently they cannot be affected by the ingestion of fluoride before the baby is born.

### LOOK YOUR BEST

1] Just because you are pregnant is no reason for you to become lackadaisical in your dress, cleanliness, daily habits, and body care.

2] Allow enough time each day from your housework and the care of children to take care of yourself. If you have a large busy household, make your schedule of work and personal care a flexible one. With wise planning you can find time for everything. Nothing gives you a better "lift" during pregnancy than good grooming, and remember that your husband and physician also appreciate this.

3] Establish a daily routine for "beauty" care and maintain it throughout pregnancy. Keep your hair clean and brushed daily. Do not neglect your skin; keep it clean and sparkling. If you are accustomed to using lipstick and rouge, continue to do so. Keep your hands clean and your fingernails manicured.

4] If you wish to preserve your

figure, as most women do, follow the instructions regarding weight, diet, and vitamins religiously. A restriction of your weight gain to not more than 20 lb. throughout pregnancy is very important. A balanced high-protein diet as outlined above will assure good nutrition. Moderate walking will maintain good muscle tone. A proper-fitting maternity girdle after the fifth month will provide support for the pelvis and abdomen. This often helps to avoid separation of the abdominal muscles.

### CARE OF HAIR

1] If you so desire, you may wash your hair as often as once a week during pregnancy. No special soap or shampoo oil is necessary; any good preparation will do which produces a satisfactory cleansing lather. Be certain to dry your hair thoroughly before exposing yourself to the elements, so that you will not catch cold.

2] There is no harm in having a permanent wave during pregnancy. However, this should not be done during the last month. Your hair is more apt to break at this time and the permanent will be wasted.

### CARE OF ABDOMEN

1] During the latter months of pregnancy most women develop stretch marks on the abdominal wall, caused by the enlarging womb. These lines, which are known as the striae of pregnancy, are due to overstretching of the skin and often can be avoided by refraining from rapid and excessive weight gain.

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Some obstetricians advise their patients to massage the abdomen with cocoa butter in order to prevent these marks. It is doubtful whether any benefit accrues to the patient from such a procedure. Many patent medicines sold for this purpose are, if not harmful, at least widely overrated in the advertisements.

2] The abdominal wall will probably benefit more from a well-fitted maternity girdle than from any form of massage.

### CLOTHING

1] Proper clothing must be worn during pregnancy. Such clothing should be simple and must never hinder breathing or free movements of the arms or legs. Therefore, you must not wear round garters, tight corsets, or tight skirts.

2] All clothes should be designed for comfort's sake rather than to disguise pregnancy. Dark clothes tend to make the figure look smaller.

3] Undergarments should consist of a well-fitted brassiere and comfortable panties. At about the fifth month, a carefully fitted maternity corset is advisable. Before that time, the usual variety of girdle, such as a comfortable 2-way stretch, is satisfactory in most cases. A very few women with unusually strong abdominal muscles are capable of carrying an average-sized pregnancy without the use of a maternity girdle.

4] Good-fitting, well-constructed shoes are essential. These should be roomy, to allow for the usual spread of the feet which occurs in

the latter months of pregnancy. Shoes with Cuban heels are preferable. Rubber heels, of course, are of some value in lessening jarring while walking.

### EXERCISE

1] Normal physical activity is desirable during pregnancy. The amount of exercise will vary considerably for different individuals.

2] In general, no exercise should be done which is exceptionally active and tiring.

3] A good thought to remember is the following: No matter what the physical activity is, stop it before becoming overtired.

4] Women accustomed to certain sports, such as golf, may participate in these sports to a limited extent and only during the early months of pregnancy.

5] If you have previously lost a pregnancy in the early months or if spotting or bleeding occurs in the present pregnancy, no exercise of any kind should be undertaken.

6] Your obstetrician may not approve of swimming, tennis, cycling, skating, dancing, bowling, or horseback riding at any time during pregnancy. Be certain to ask him specifically as to whether any or all of these activities may be permitted during your particular pregnancy.

7] All patients should use reasonable precautions against undue physical activity at the time a menstrual period would be expected. This is especially important for women who have lost one or more previous pregnancies. If in doubt, consult your obstetrician.

INJURIES DURING PREGNANCY

1] Frequently, pregnant women telephone their obstetricians in an intense state of anxiety, fearful that some harm may befall their baby because they have received a blow on the abdomen or been injured by a fall or accident.

2] Blows on the abdomen, deliberate or accidental, may be harmful. If severe enough, they may loosen the afterbirth, producing a concealed or visible hemorrhage.

3] Should you sustain an injury from a fall or a blow, go to bed and inform your physician at once. Be on the lookout for such symptoms as abdominal pain associated with a "hard abdomen," spotting or bleeding from the vagina, or the breaking of your bag of waters.

4] In general, the growing baby is well protected, being suspended in the amniotic fluid which cushions even direct blows on the abdomen. It is well for you to exercise caution, first in preventing injuries and, subsequently, in reporting early to your physician should an injury occur.

5] Changes occur in the pelvic joints as a result of pregnancy and tend to spread the pelvis and tilt the body. This causes the pregnant woman to walk with a somewhat waddling gait. Therefore, care should be exercised to wear proper-fitting low-heeled shoes to avoid tripping or falling.

TRAVEL

1] Before World War II most obstetricians felt that travel during pregnancy should be completely

prohibited. Experience during the war, however, has indicated that pregnant women may travel under some circumstances and with a certain degree of safety. The greatest disadvantage is not the actual travel, but the fact that should any emergency arise, such as bleeding, medical care may not be available.

2] No woman should travel during pregnancy at or about the time she might expect her menstrual period. Women who have lost one or more previous pregnancies, either before or at term, should avoid travel. When travel is imperative, it is often preferable to go by airplane rather than by railroad or automobile.

3] If you drive an automobile, you may continue to do so during pregnancy. However, do not drive when you have abdominal pains, vaginal bleeding, or spotting. Long automobile drives should never be taken during pregnancy.

WORK

1] The average pregnant woman, with certain important restrictions, may do her own housework.

2] When the household consists of two floors and it is necessary to go up and down steps several times a day, care should be exercised to avoid falls and injuries.

3] Heavy housework must be avoided. Moving heavy furniture, scrubbing walls and floors, and similar tasks are not permitted. Keep your house clean but do not be a perfectionist.

4] When toilet facilities are not on one floor, it might be advisable to make some temporary arrange-

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ments, at least for urination, in order to avoid climbing steps as much as possible.

5] If bleeding or spotting occurs during pregnancy, all work should be discontinued. These symptoms require complete bed rest under the supervision of your physician.

6] Keep occupied during pregnancy. Work is often an excellent panacea for emotional disturbances. Insufficient physical and mental activity can be just as disturbing as overtaxing your strength.

7] If for economic or other reasons you wish to be gainfully employed, you may do so as long as the occupation is not too taxing. Under ordinary circumstances, however, you should quit your job not later than the end of the sixth month. Most firms prefer to be informed concerning pregnancy. By so doing, you may avoid such penalties as loss of insurance, seniority rights, and other privileges. Often you may obtain helpful advice and counsel through the health service of your company, particularly if it is a large industrial organization.

### INSECTICIDES

1] Pregnant women should avoid the direct use of such insecticides as DDT, particularly in spray form.

2] Recent reports have indicated that these insecticides are dangerous to health and in pregnant animals have been known to cause abortions and fetal deaths.

### PAINTING

1] Avoid prolonged exposure to the fumes of dry cleaning fluids, paints, and the like. The fumes of

evaporating solvents may be especially harmful during pregnancy.

2] It is preferable that you do no painting, such as furniture or interior decorating, during your pregnancy.

3] A few pregnant women, out of necessity or desire, assist their husbands in paper hanging and wall washing at home. These occupations are too hazardous for women during pregnancy.

### BATHING

1] During pregnancy, the activity of the sweat glands of the skin is greater than normal since the skin assists the kidneys in carrying off the waste products of the baby as well as of yourself.

2] For proper cleansing of the skin as well as for stimulation of the circulation, daily bathing is essential during pregnancy.

3] If available, showers are preferable. The water should be neither too hot nor too cold. Hot baths are fatiguing. Cold water is not satisfactory for cleansing purposes.

4] Tub baths may be taken if desired but must be discontinued during the last two months of pregnancy. If membranes rupture prematurely, under no circumstances is a tub bath to be taken.

5] Tub baths are not really cleansing. As part of the body is washed, the water becomes soiled and the remainder of the cleansing process takes place in water already contaminated.

6] Bathing in outdoor or indoor pools, lakes, or the ocean should not be done without the express permission of your obstetrician.

#### REST

1] Frequent rest periods are advisable. Most pregnant women will find an hour's nap after lunch refreshing. When children are in the home, the rest period can be taken while they are having their own naps or, if older, while they are at school.

2] To receive the full benefit of such rest, complete relaxation must be obtained.

#### SLEEP

1] Eight hours of sleep in a well-ventilated, draftless room is essential for a pregnant woman. She should sleep alone, when possible.

2] Do not use sleeping medicines of any type without first consulting your physician.

3] You may sleep in any position you find comfortable. Sleeping on your abdomen is not dangerous.

#### SMOKING

1] Moderate smoking during pregnancy is permissible. It should be reduced to a minimum during the last month and, preferably, discontinued if the baby nurses at the breast.

2] If you smoke, do so after meals rather than before or between meals. Smoking for pleasure or enjoyment may be relaxing. Smoking because of a nervous habit is pernicious and can be dangerous if carried to extremes.

3] Do not smoke when you have a cough or a cold. Upper respiratory infections such as colds, sinusitis, pharyngitis, and laryngitis frequently are aggravated by smoking.

#### FACIAL CHANGES

1] During the latter months of pregnancy many patients develop a broadening of the face with a brownish pigmentation across the bridge of the nose extending onto the cheeks. This is known as the mask of pregnancy and usually disappears shortly after delivery.

#### RELAXATION OF PELVIC JOINTS

1] In order to accommodate the growing baby, the pelvic joints relax during pregnancy. The sacroiliac as well as the pubic joints relax.

2] The amount of separation of the joints varies in different women. Relaxation begins early in pregnancy and is greatest at about the seventh month.

3] This relaxation accounts for pain and tenderness in the region of these joints. Such symptoms appear at about the sixth or seventh month, though not all women have them. In many cases, when present, the symptoms are comparatively mild. A few women have considerable pain on standing or walking. To avoid these pains as much as possible, you should refrain from sudden movements, careless lifting, or unwise athletic activities.

4] The wearing of a well-fitted, well-constructed maternity support during pregnancy will, in most instances, prevent development of these symptoms.

5] The relaxation usually diminishes after delivery and in most cases the joints return to their normal state within six months. It is, therefore, advisable to wear a well-fitted support during your pregnancy and after your delivery.

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### VAGINAL DISCHARGE

1] During pregnancy the amount of discharge in the vagina increases. In the early months, the secretion is usually not great enough to require any care. During the latter months it may increase to such an extent as to become annoying. Often this discharge irritates the lips of the vagina and the surrounding area and produces an odor.

2] If present to excess, a pitcher douche will be helpful. This consists of separating the lips of the vagina and pouring a pitcherful of comfortably warm water over the area to wash the secretion away. Shower baths will also suffice.

3] If the discharge is profuse and irritating, please inform your obstetrician. Do not, under any circumstances, take a douche or a vaginal irrigation without the permission of your physician. He will inspect the vagina and cervix thoroughly to discover the source of the discharge and to institute the proper therapy.

4] Occasionally during pregnancy, a vaginal discharge must be treated when caused by a specific organism. Frequently, this occurs as a result of improper cleansing of the perineal area because of the lack of knowledge of perineal anatomy and physiology and the lack of proper instruction.

5] When treatment of the source of the vaginal discharge is necessary during pregnancy, your physician will give you proper instructions regarding your daily care. If he advises you to cleanse the vagina by irrigations or douches, ask him for specific instructions.

### PERINEAL HYGIENE

1] Perineal hygiene is the term given to the hygienic care of the perineal orifices, the vagina and anus, and also the area surrounding these openings.

2] Most women are not aware of the importance of cleanliness in this region and, because of embarrassment and timidity, do not discuss this subject with their physicians. Faulty cleansing of the perineal orifices in the female may lead to infections in the vagina, bladder, and neck of the womb.

3] There is an effective method of cleansing the perineal areas which avoids contamination. Proper precaution lies in cleansing the vaginal and anal openings separately.

4] After urination, the toilet tissue should be used as a blotter to absorb the excess moisture and should *never* be employed with either a forward upswing or backward motion.

5] Anal cleansing after bowel movement is best done from the side and must *never* be done in a forward upswing motion between the thighs.

6] Thus, by cleansing the two perineal orifices separately, the possibility of contamination or infection being transmitted to the vagina, bladder, and glands in the neck of the womb is decidedly lessened.

### COLDS

1] Avoid sudden temperature changes, if possible. In the Great Lakes and other regions where the climate can vary suddenly and

## SPECIAL ARTICLE

greatly in a twenty-four-hour period, you will do well to dress accordingly to avoid a cold.

2] If you are to be delivered during seasons of the year when colds are prevalent, and particularly if you are subject to colds, use the utmost caution in avoiding crowds, theaters, and gatherings of any kind.

3] In this respect, an ounce of prevention is worth a pound of cure. If a cold develops, do not try to treat it yourself. Go to bed and inform your physician. Do not use the newer so-called "cold drugs" without the knowledge and permission of your obstetrician.

### FEELING LIFE

1] Women having their first baby become conscious of a fluttering movement in the lower abdomen about the eighteenth week after conception. This is called "feeling life" or quickening and represents movements of the baby. Women who have had one or more babies will have this sensation as early as the sixteenth week. It is considered improbable for women to feel life before this date, since the baby does not develop the capacity for movement any earlier.

2] Please inform your physician of the date you first feel life. Often it is possible to use this date as a means of checking your due date.

3] Ordinarily, life is felt when you are resting, particularly at night. The movements of the baby become stronger as the baby grows larger. Be certain to inform your obstetrician if, after life has begun, you fail to feel movement daily.

### SHORTNESS OF BREATH

1] As a result of the growing womb, the abdominal contents are compressed under the diaphragm, particularly during the last two months of pregnancy. The larger the baby, the greater the size of the womb and the resultant compression of the diaphragm. This reduces the space for the lungs and prevents them from being properly ventilated.

### LIGHTENING

1] Two or three weeks before the onset of labor the baby sinks downward and forward. This is called "settling" or "dropping" or, more technically, "lightening."

2] Lightening occurs in about 65% of all pregnancies and is caused by the gradual sinking of the baby into the pelvis.

3] Patients become aware of this and report to their physicians that they are able to breathe more easily. This is because the abdominal contents are no longer compressed against the diaphragm.

4] Occasionally, a baby will not drop into the pelvis until labor begins. Whether lightening takes place or not should be of no particular concern to you as long as your obstetrician is aware of all the factors involved in your pregnancy.

### MARITAL RELATIONS

1] Sexual intercourse should be restricted the first three months of pregnancy and completely eliminated during the last two months.

2] Women who have a tendency to abort or to have a premature labor should refrain from inter-

## SPECIAL ARTICLE

course throughout the entire pregnancy.

3] It is also of extreme importance to refrain from intercourse on the days of the month when your menstrual period would have normally occurred. At these particular times there is considerable danger of initiating a miscarriage.

4] Your husband must understand that sex relations during pregnancy should depend entirely on your desires and not on his. Since a number of women either increase or decrease their sexual appetites during pregnancy, their individual feelings in the matter should be respected by husbands.

### MINOR AILMENTS

A number of so-called minor ailments occur during pregnancy which may be annoying and troublesome.

1] *Heartburn* is a burning or smarting sensation beneath the breast bone or in the throat. Often this can be alleviated by simple drugs or dietary changes.

2] *Belching* occurs naturally after a large meal when the stomach is stretched and air is forced back up the esophagus. This can be avoided by not overeating. When persistent and in the presence of other intestinal symptoms, belching may be due to gallbladder disease and should be investigated. Often repeated belching is due to swallowing of air which fills the esophagus but is unable to enter the stomach and is returned. This becomes a habit and is related to certain emotional disturbances such as an anxiety neurosis. Self-control is of-

ten sufficient to abolish this troublesome habit.

3] *Nausea and vomiting* is present in about 50% of all pregnant women during the first three or four months. Changing the amount and type of food eaten is often of considerable help. Frequent small meals and the drinking of fluids slowly and in small quantities sometimes alleviate the condition. Drugs and hormones by mouth or by injection may give relief. As a result of experiences during World War II, the U. S. Navy developed a new drug which prevented seasickness among sailors. Since then it has been tried by pregnant women for the relief of nausea and vomiting with fairly good results in some cases. In many instances, nausea and vomiting in pregnancy have an emotional basis in a subconscious rebellion on the part of the patient against being pregnant. A frank discussion of this problem with your doctor often is of exceptional value in eliminating this symptom.

4] *Fainting and dizziness* is common during pregnancy and usually is nothing more than a feeling of lightheadedness that rarely lasts more than a few minutes. Patients seldom lose consciousness. Should you experience such an attack, sit or lie down in such a position as to permit more blood to reach the head. Report any attacks to your obstetrician. Upon occasion, this symptom is caused by the anemia associated with pregnancy; more often it has a nervous origin.

5] *Leg cramps* are muscle

(Continued on page 138)

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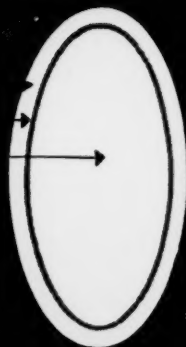
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## SPECIAL ARTICLE

spasms felt usually in the calves and particularly at night. They may be a result of vitamin or calcium deficiency. These spasms can be relieved by massage of the muscles involved and by rapid exercises of the feet. For prevention, adequate intake of milk and vitamins must be maintained.

6] *Backache* during pregnancy is most often caused by the loosening of the sacroiliac joints. In almost all instances relief is obtained by wearing a well-fitted maternity girdle which supports the abdomen as well as the back. In addition, proper shoes are essential. For temporary relief, a hot water bottle, heating pad, or hot bath may be tried.

7] *Headaches* which recur or persist should be reported to your physician. In many instances, these are not of serious significance during pregnancy. However, the cause, whether physical or emotional, should be investigated so that the proper treatment can be instituted. Do not take aspirin or similar remedies without your doctor's permission.

8] *Varicose veins* are more frequent in women who have had 1 or more children. The veins in the legs and the thighs and sometimes on the lips of the vagina lose their elasticity and remain filled with blood. Patients with varicose veins should be off their feet as much as possible. When large and tender, the veins should be supported by an elastic bandage or a rubber stocking. It has not been considered advisable to operate or to inject varicose veins during pregnan-

cy. Do not wear ring or round garters. Often after delivery varicose veins improve to such an extent as to make treatment in any form unnecessary.

9] *Abdominal pain* during the early months of pregnancy may be a sign of impending miscarriage. In the latter months, this may be a sign of false or premature labor. Once in a while, abdominal pain may be the indication of gallbladder disease, appendicitis, or other surgical condition. On other occasions, the pain may be caused by pulling on the ligaments that support the womb. However, periodic recurrent pain, particularly when cramp-like in nature, may be especially important. Therefore, any type of abdominal pain should be reported to your doctor at once.

10] *Hemorrhoids* are a rather common and troublesome ailment during pregnancy. The chief symptoms are bleeding and pain. Since hemorrhoids are always aggravated by constipation, proper care of the bowels is essential. Read the portion of these instructions which discusses the subject of constipation. Certain remedies can relieve the symptoms of hemorrhoids. Report such symptoms to your physician.

11] *Nosebleeds* occur occasionally during pregnancy. Usually the bleeding is slight and needs no treatment. If the bleeding is repeated frequently, the nasal cavities should be examined.

12] *Frequent urination* is common during the early months of pregnancy and results from pressure on the urinary bladder by the growing womb. The condition is

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Riboflavin ( $B_2$ ), 2.5 mg. (125% MDR)  
Vitamin  $B_{12}$ , 1 microgram  
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\*\*Pantothenic Acid (as panthenol), 10 mg.  
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Calcium (as Ca glycerophosphate), 48 mg. (6.4% MDR)  
Phosphorus (as Ca glycerophosphate), 39 mg. (5.2% MDR)  
Iodine (as KI), 1 mg. (1,000% MDR)  
Potassium, 10 mg.  
Magnesium (as  $MgCl_2 \cdot 6H_2O$ ), 2 mg.  
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\*\*Manganese (as  $MnCl_2 \cdot 4H_2O$ ), 2 mg.  
Iron (as ferrous gluconate), 20 mg. (200% MDR)  
Alcohol, 18%  
\*\*The need for these substances in human nutrition has not been established.  
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also common during the last few weeks of pregnancy, being caused by pressure of the baby as it drops into the pelvis. You can avoid frequent urination at night by curtailing your fluid intake after your evening meal.

13] *Sleeplessness* should be reported to your physician. Do not take sleeping medicine of any kind without his permission. Sometimes a warm glass of milk before retiring is helpful in promoting sleep. Do not use any of the patent food preparations advertised and sold for that purpose.

14] *Swelling of the feet* and ankles, if slight, need not cause undue concern. It is rather common in warm weather. Noticeable swelling in the lower extremities or on the hands or face should be reported at once. This may be one of the earliest signs of toxemia, a poisonous condition that occurs in some pregnant women.

15] *Palpitation* is a fluttering-like sensation felt beneath the breast bone or in the region of the heart. Usually nothing is organically wrong. If persistent, your obstetrician should be informed.

16] *Excessive formation of saliva* occurs once in a great while during pregnancy. Ordinarily it is not serious, unless associated with other conditions. If the salivation is excessive, it must be reported to your physician so that steps may be taken to alleviate the difficulty as much as possible.

17] *Perverved appetites* are seen in rare instances among pregnant women. Such patients are advised to curtail their cravings for peculiar

and odd foods. No treatment is necessary.

18] *Painful contractions* of the womb during pregnancy occur in a few women. Sometimes these can be troublesome and, although they can take place at any time during pregnancy, are more common in the last two to three months. They resemble labor pains except that they vary in duration, intensity, and frequency and have no rhythmic pattern. When these occur late in pregnancy, they may be termed false labor pains. Since they may lead to the onset of labor at any time, report such pains to your obstetrician immediately. Measures can be instituted to give you adequate relief.

### SIGNS OF TROUBLE

If any of the following symptoms occur during your pregnancy, notify your obstetrician without delay:

- Rapid gain in weight
- Swelling of feet, ankles, hands, or face
- Blurred vision or spots before the eyes
- Shortness of breath
- Diminished output of urine
- Persistent vomiting
- Persistent headaches
- Stubborn constipation
- Repeated fainting spells
- Infection or fever
- Severe cold or cough
- Failure to feel the baby daily after life begins
- Spotting or bleeding from the vagina
- Watery discharge from the vagina
- Painful contractions of the womb

### TOXEMIAS

1] Toxemias are a group of important complications which may



typical myxedema patient



and her subclinical cousin

## What about the lady on the right?

Whenever you decide that thyroid is needed, whether in frank myxedema or a distantly related state of subclinical hypothyroidism, Proloid provides the complete hormone source, purified thyroid extract. Because Proloid's potency is uniform, its therapeutic use is easier to manage and evaluate.

Thus the lady on the right, the subclinical hypothyroid patient, who complains of vaguely defined disorders such as menstrual irregularity, lethargy or "sterility" can receive a course of Proloid therapy with minimal risk and with assurance of an adequate and smooth response.

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In addition, long-term therapy in responsive patients is safer because a well-managed Proloid regimen is free from ups and downs caused by potency variation. Proloid is assayed both chemically and biologically in test animals.

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occur chiefly during the last three or four months of pregnancy.

2] The main symptoms to watch for are a rapid gain in weight; swellings of the fingers, hands, and face; persistent headaches and blurring of vision. If, in conjunction with these symptoms, your physician finds that your blood pressure is elevated and that there is albumin in your urine, you should be hospitalized at once and intensive treatment instituted.

3] In some patients the symptoms do not abate even with intensive treatment and it becomes necessary to induce labor or deliver the patient by one means or another.

4] If the symptoms of toxemia are not recognized by the patient or her physician and are allowed to progress, a serious condition known as eclampsia may develop. This is a severe toxemia in which the mother has convulsions and which is frequently fatal to the baby and a serious threat to the mother's life as well. Eclampsia appears to be more prevalent among unusually heavy women, while toxemia is twice as frequent in patients who are too thin at the onset of pregnancy.

5] In treating some of the very early signs of toxemia, your physician may advise you to curtail or eliminate the use of salt from your diet. If that becomes necessary during your pregnancy, it will be to your best interests to comply fully with your physician's instructions. Since salt tends to encourage water retention in the body, care must be used in adding salt to your food after it is cooked. Such foods as

bread, meat, cheese, salted butter, milk, and salad dressings are hidden sources of salt and often contain more salt than the pregnant woman requires, particularly in the presence of toxemia.

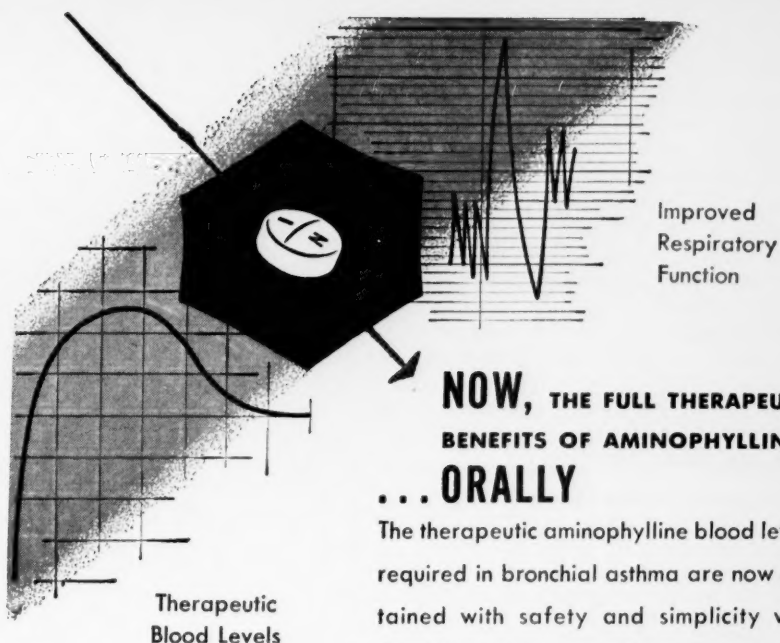
6] Finally, you must realize the great importance of prophylaxis during your prenatal period. Keep your weight gain down to **LESS THAN 20 lb.** for the entire nine months. You must maintain a delicate nutritional balance throughout your pregnancy with a diet adequate for your particular needs. Weight gain should be slow and gradual. Sudden excessive gain in weight may be the very first sign of impending trouble. Visit your physician regularly. Comply with his instructions at all times. Be certain you report all signs of trouble as listed previously. Be certain that your physician checks your blood pressure and your urine at each prenatal visit.

### SPOTTING AND BLEEDING

1] Spotting or bleeding often is the first sign of the possible loss of a pregnancy. If this happens to you, no matter what stage of pregnancy you are in:

- Go to bed at once and refrain from all activities.
- Have your obstetrician notified and comply completely with all his instructions.
- Entirely eliminate intercourse until your obstetrician feels that you are no longer in danger of losing your pregnancy.
- Remain at home, preferably off your feet, at or about the time of the expected subsequent menses.

2] Many substances have been given patients with threatened



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abortions for the purpose of attempting to save the pregnancy. At present there is considerable skepticism concerning their value.

3] There is an apprehension among the laity that if a patient survives a threat to abort, she will give birth to a malformed infant. *Nothing could be further from the truth.* At least 98.5% of all patients who have signs of threatened abortion in early pregnancy and who carry their pregnancies to term will have normal infants.

### PREDETERMINATION OF SEX

1] Do not ask your obstetrician to predict the sex of your expected child. In spite of what you may hear to the contrary, sex, as yet, cannot be diagnosed before birth. The method based on the baby's heart rate is highly unsatisfactory. Roentgenograms cannot reveal the sex of your expected baby. As a result of intensive research in this field in recent years, it may be possible, in the not too distant future, to predetermine sex. The most likely method may be the chemical determination of hormonal concentration present in certain bodily secretions.

2] Sex is determined at the time of fertilization of the egg by the sperm cell and it is the latter which determines the sex of the offspring. All sperm and egg cells have 48 chromosomes, 2 of which serve primarily to determine sex. In the sperm cell these 2 chromosomes differ. One is called X and the other Y. In the egg cell both these chromosomes are identical and are called X. A sperm or an egg cell

receives only one-half or 24 of the original 48 chromosomes at the time of maturation. Therefore, each sperm cell will carry either an X or a Y chromosome and each egg will have just one X chromosome. As a result, a sperm cell with an X chromosome which joins with an egg cell with an X chromosome produces a girl. A sperm cell with the Y chromosome uniting with the egg cell that contains the X chromosome will produce a boy.

### SUPERSTITIONS

1] The human race is still superstitious and believes in magic and sorcery. This is instilled into children by their parents and handed down from generation to generation.

2] Even in this comparatively enlightened age, too many prospective mothers still believe the superstitions associated with pregnancy.

3] Fright, fear, shock, prenatal impressions, and the like can in no way mark or disfigure your child.


4] What your child will be as to inherited characteristics was determined long before you or your husband were born and depends on the arrangement of the genes in the chromosomes.

5] Many patients ask whether worry during pregnancy will affect the expected baby. The answer is definitely *no*. However, patients who worry, often needlessly, have anxieties and fears which frequently have a basis in insecurity and inferiority developed in childhood. A frank discussion of these worries



complete, effective, three-way therapy  
of peptic ulcer with

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to counteract corrosive  
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to stabilize emotional  
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## SPECIAL ARTICLE

with your obstetrician often will alleviate the condition. He is in a position to remove all the doubts and fears that you may have acquired in regard to pregnancy, labor, and delivery.

6] A number of women who lose their first pregnancies as a result of unavoidable conditions develop an understandable fear during their second pregnancy. This apprehension will frequently color their attitude toward the prenatal course, labor, and delivery. It is well for these women to remember that no two pregnancies are alike. The loss of one pregnancy rarely affects a subsequent pregnancy. The only exception to this statement occurs when the loss of a pregnancy at term is due to a small pelvis that is not properly diagnosed.

### ADVICE TO HUSBANDS

Your husband should read and familiarize himself with these instructions. He can be of inestimable service to you in maintaining your morale. To do so, he must be friendly, cheerful, and patient. He must refrain from arguments and be above petty annoyances. On the other hand, you should not use your pregnancy as a means of obtaining undue sympathy from your husband, family, or friends.

### BEFORE LABOR BEGINS

1] For the last six to eight weeks before your expected due date, it is advisable that you obtain plenty of rest. An hour's relaxation during the day is very helpful. Be sure to get eight to ten hours of sleep.

2] Since a tendency to excess weight occurs near the end of pregnancy, watch your diet closely.

3] Avoid crowds, theaters, and long rides in streetcars and automobiles.

4] Arrange for your transportation to the hospital and try to learn what entrance is to be used.

5] Do not be impatient. Your pregnancy will terminate normally when certain factors, beyond your control, are present to initiate labor.

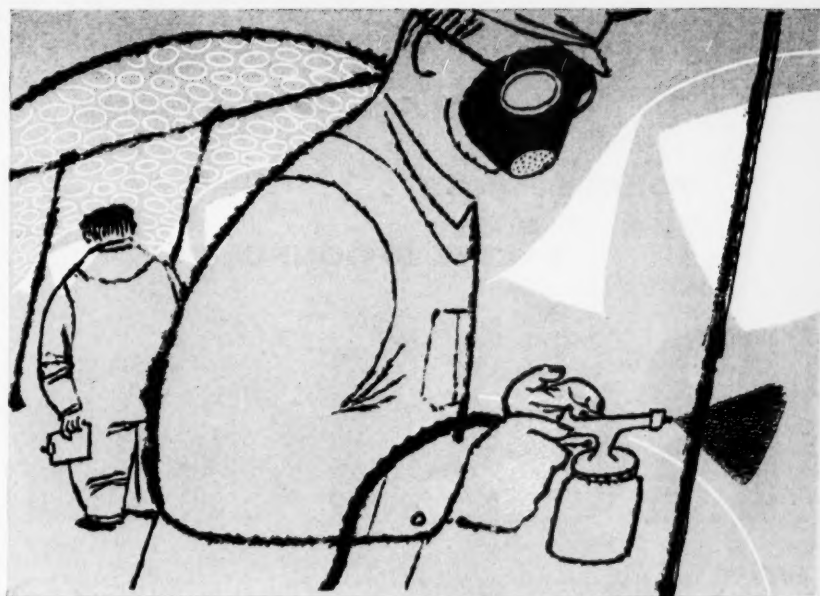
### PAINLESS CHILDBIRTH

1] In recent years, there has been considerable publicity given to many new forms of "painless childbirth." Enthusiastic magazine and newspaper articles extol the particular benefits to be derived from each of these methods.

2] The ideal method for painless childbirth has yet to be discovered. All good hospitals use an acceptable method for the relief of pain during labor and delivery. Most institutions have several methods, fitting the method to the particular patient. Rest assured that you will receive relief from pain during labor as conditions permit. You will receive additional information in this regard at a later date.

3] No one method of painless childbirth is generally applicable to all pregnant women nor is it always absolutely safe for all mothers and all babies. Since over 90% of all births in this country now occur in hospitals, relief of pain during labor is used extensively. The experience

*(Continued on page 150)*



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NOT removed by ordinary washing, COVICONE Cream offers the long-lasting qualities often desired in the management of industrial and allergic dermatoses. An entirely new formula, COVICONE is a special *plasticized* combination of silicone, nitrocellulose and castor oil. Applied to the skin, it forms an effective but invisible physical barrier against sensitizing and irritating agents.

Suspended in a vanishing cream base, COVICONE is easy to apply, is not sticky or

greasy. To build up the protective layer, the cream is applied twice daily for 10 days to two weeks. Effective protection can then be maintained indefinitely with a single application every one or two days. COVICONE is indicated wherever skin protection is desired from environmental substances; there are no contraindications except premature application on wet, exudative lesions. COVICONE is available at pharmacies in one-ounce tubes and one-pound jars. **Abbott**

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1. *Exper. Med. & Surg.* 9:90, 1951. 2. *Rev. Gastroenterol.*, 19:660, 1952.



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**DIARRHEA...INFANTS AND ADULTS**

**NAUSEA OF PREGNANCY**

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## SPECIAL ARTICLE

of all large institutions indicates that the use of proper medication for the relief of pain in labor does not increase the hazard to the baby. Recently, an authority in the field of anesthesia, after a very extensive study, showed that uncontrolled labors often result in more harm to the baby than labors in which medication is used intelligently.

4] A number of patients select an obstetrician on the basis of his reputation among women for "painless labors." This is unfortunate for both the patient and the physician, as often circumstances beyond the control of either prevent the fulfillment of this goal. A physician should not enhance his reputation among the laity at the expense of his patients.

### NATURAL CHILDBIRTH

1] Much has been written in the past few years about "having a baby naturally." This has aroused considerable curiosity and interest on the part of pregnant women.

2] The aim of natural childbirth is to make your labor and delivery emotionally and physically satisfactory. To accomplish this, a conditioning process of teaching and exercises is begun very early in pregnancy. This includes the teaching of the simple physiologic facts of pregnancy, labor, and delivery, together with exercises which improve the function of the abdominal and perineal muscles. In addition, techniques of relaxation are taught.

3] Of great importance is the fact that the anxieties arising out

of ignorance and superstition are removed and in their place a true knowledge of the processes of labor and delivery is gained. Often this instruction is given in groups, since patients tend to obtain much more reassurance and confidence in groups than when taught individually.

4] It is essential that nurses and doctors be trained in this field of so-called natural obstetrics so that patients may obtain the most benefit from these teachings. As yet, very few maternity clinics in this country are equipped, through the teaching of these principles, to employ its technic for patients.

5] Not all patients wish to or should be permitted to submit to this course of teaching and exercises. Until more is known, patients with unstable personalities should not be permitted to undergo this type of labor or delivery. Physicians experienced in this field tell us that this program of training for muscular relaxation is in a sense a form of hypnosis in that the patient desiring natural childbirth must have an abiding faith in the person who acts as her teacher. In addition, she cannot expect the best results unless she has a great personal need for such an attachment. One authority points out that the success which can be obtained through natural childbirth is approximately the same from a statistical standpoint as the hypnotizability of the public at large.

6] It must be remembered that this form of natural childbirth as practiced in the United States, which is a modification of the orig-

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## SPECIAL ARTICLE

inal teachings of Grantly Dick Read, an English obstetrician, includes the use of some anesthesia with the administration of appropriate drugs during labor and delivery.

7] When episiotomies are done a local anesthetic injection is used.

8] To date nothing has been written as to whether the natural childbirth mother gets along any better after she leaves the hospital than do other maternity patients. It *must not* be assumed that if you undergo natural childbirth successfully you will be a more emotionally mature individual, better able to care for your baby. It has been said that instead of making a patient more mature and stable, natural childbirth may encourage greater dependence upon an important, authoritative figure, sup-

ported by rather complex ritualistic routines.

9] No one has proved as yet that having your baby by natural childbirth is better for you physically and emotionally. The methods of natural childbirth are actually not new but rather a return to some extremely old concepts of childbearing with some modern modifications and additions. It is doubtful that natural childbirth can accomplish in the next quarter of a century what modern technics have done in the last two decades, namely, a decrease in maternal mortality of almost 80%. Like all new methods, as well as the reevaluation of older technics, natural childbirth must withstand the test of time, on the part of both pregnant women and their attending obstetricians.



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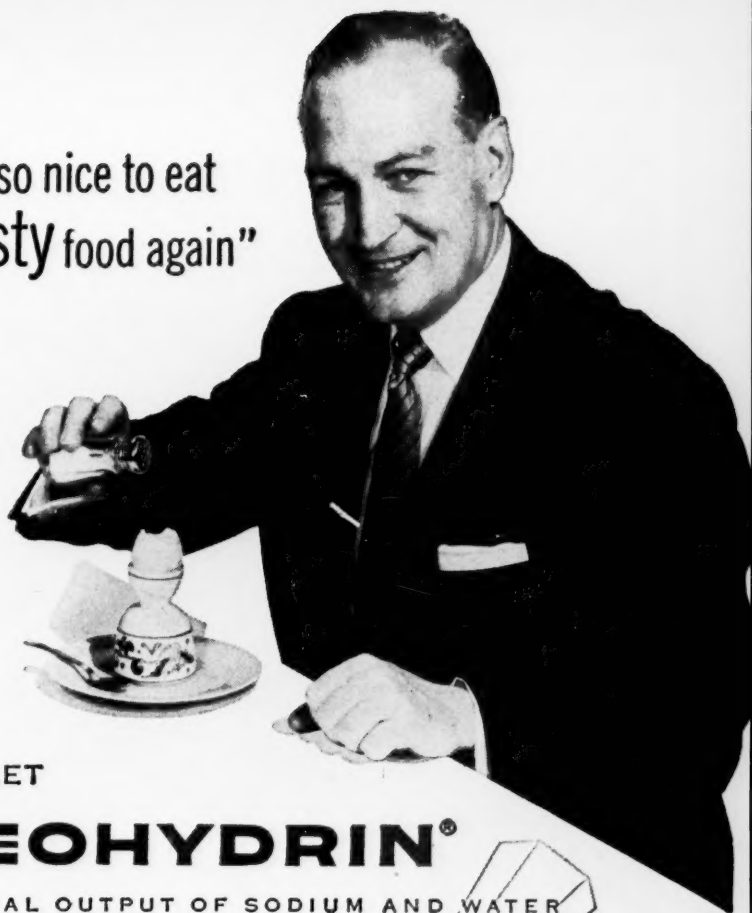
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Covington, Tenn.*

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1. McHardy and Browne: *Sou. M.J.* 45:1139, 1952.

2. Lorber and Shay: *Fed. Proc.* 12:90, 1953.

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# Medical Forum

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## Recurrent Intestinal Obstruction\*

**QUESTION:** What is the best surgical procedure for prevention of recurrent intestinal hernia?

*Comment invited from*

*William C. Beck, M.D.*

*M. G. Gillespie, M.D.*

*Warren H. Cole, M.D.*

*John H. Gifford, M.D.*

*Philip Thorek, M.D.*

*Charles D. Sherman, M.D.*

*Arkell M. Vaughn, M.D.*

► TO THE EDITORS: The management of recurrent intestinal obstruction is certainly one of the most difficult and perplexing problems facing the surgeon today. As Drs. Victor P. Satinsky and Samuel D. Kron suggest, there are essentially 2 methods of approach. The first is to prevent the recurrence of the deforming adhesions, while the second is to accept the formation of adhesions but to place the bowel into such a position that the adhesions will produce little deformity of an obstructive nature. The operative procedure which the authors suggest falls into the latter category.

In our past experience, papain (Caroid) has some merit. It is an  
\*MODERN MEDICINE, Apr. 15, 1953, p. 104.

actively proteolytic ferment which does not attack viable tissues. The distribution in the peritoneal cavity, however, is inconstant and admixture with blood and serum which occurs soon after insertion limits effectiveness. The plication operation appears to be definitely worth while and we have not seen the complications which Drs. Satinsky and Kron say may follow the procedure.

Having had absolutely no experience with the operation suggested by these authors, I can discuss it only on theoretical grounds. It appears to be a modification of the Monks-Moynihan-Holden operation in which the distended bowel is emptied by plication over a stiff rubber tube. These authors advanced the tube through the bowel while actively aspirating the content. Thus the tube passes through decompressed bowel. On the one occasion that I used that procedure, I found that threading an entire small bowel into a tube was not easy. To feed the tube along a distended bowel through the entire length of the jejunum and ileum, aspirating through a small lumen, would appear to me to be difficult and hazardous. Moreover, this operation would not preclude the formation of constricting adhesions.



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## MEDICAL FORUM

Yet I would not like to condemn by armchair reasoning any procedure which might be helpful in this distressing obstruction diathesis. I should like to see the operation done and observe the results. I will await that opportunity, meanwhile employing the plication procedure and papain.

WILLIAM C. BECK, M.D.

Sayre, Pa.

► TO THE EDITORS: Prevention of recurrent intestinal obstruction is an interesting problem that cannot be resolved by any one method. There is no way of preventing adhesions. The hope is that adhesions which form will not produce obstruction.

At the first operation for obstruction, the adhesive band or bands are cut. If done early, the patient recovers promptly and, as a rule, no further obstruction occurs. Delay in recognition and institution of surgical treatment occurs in cases with a background of inflammatory intraabdominal disease and especially in cases of chronic recurring intestinal obstruction which have been operated upon repeatedly.

The surgeon is then confronted with a difficult question: What procedure will get the patient by and at the same time insure against development of another attack of intestinal obstruction? It is here that decompression of the small bowel plays an important role in the treatment of obstruction.

Decompression can sometimes be accomplished with a long Levin

tube, but more often the Miller-Abbott tube must be used. In such a case, the method described by Drs. Satinsky and Kron might serve a very useful purpose. If the decompression is successful, the loops of small bowel will become fixed in such a position that obstruction is not likely to recur. If unsuccessful, the small bowel is at least in a better condition for a more extensive operative procedure.

When repeated operations have been performed for recurrent small bowel obstruction, I believe that the Noble operation, in which the small intestine is plicated from the ligament of Treitz to the ileocecal valve, is the most successful procedure.

M. G. GILLESPIE, M.D.

Duluth, Minn.

► TO THE EDITORS: Of the various factors important in prevention of adhesions, I believe that careful surgery is the most important single item. By careful technic I mean gentle handling of tissues with as much obliteration of raw tissue as possible. Contamination during resection of intestine must be held to a minimum.

As yet, I have not been convinced that active stimulation of the bowel, use of anticoagulants in the peritoneal cavity, and "plication of the intestine by a tube" through the nose extending into the intestine are of value. However, I have not had experience with any of these methods.

I have had opportunity to utilize the Noble plication operation



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## MEDICAL FORUM

on a few occasions and am convinced of its value, particularly since so many surgeons have reported favorably on the procedure. Perhaps this cannot be considered a prophylactic operation, but in a certain sense the recurrence of intestinal obstruction is prevented.

WARREN H. COLE, M.D.

Chicago

► TO THE EDITORS: Recurrent intestinal obstruction is usually a tragic consequence of some relatively simple operation in the lower abdomen, such as appendectomy or pelvic laparotomy. The patients are usually women who have undergone initial surgery when they were young.

Each bout of obstruction followed by laparotomy, division of adhesions, and sometimes resection of a segment of bowel because of friability or insoluble adhesions, while giving temporary relief, seems to aggravate the situation. After repeated resections of small bowel, the patients become nutritional problems. The opiates given postoperatively on each occasion lower the patient's tolerance to pain and all too frequently lead to addiction. This latter development further complicates the problem from the diagnostic standpoint.

For these reasons, I believe that individual attacks of acute obstruction usually can and should be treated conservatively by means of long-tube decompression. Laparotomy should be avoided. Careful observation during this period is necessary to avoid missing the oc-

casional instance of closed-loop obstruction which of course requires laparotomy.

When the tube fails to decompress and laparotomy becomes necessary, the type of corrective surgery advocated by Noble has given the best results. In this procedure, the entire small bowel from the ligament of Treitz to the ileocecal junction is freed from limiting adhesions. The bowel is then plicated in 6- to 8-in. segments, united side by side, to prevent adherence in a disorderly fashion between bowel and adjacent mesentery.

Care is taken to close all gaps with seromuscular sutures using nonabsorbable suture material. The bowel should be splinted on a long tube for at least one week postoperatively.

JOHN H. GIFFORD, M.D.

Los Angeles

► TO THE EDITORS: No satisfactory or Utopian therapy is known for a complete, nonstrangulated, small bowel obstruction. The procedure, however, which has resulted in a higher percentage of beneficial results in my hands is the Noble plication method. Since we know of no means to completely prevent adhesions, one might just as well direct the formation of adhesions in such a way that acute angulations and kinks are minimized. The Noble operation seems to meet this desideratum.

I have no experience with the method presented by Drs. Satinsky and Kron. Their method of controlling adhesions by suspending



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1. Bralow, S. P., Spellberg, M., Kroll, H., and Necheles, H.: *Am. Jour. Digest. Dis.*, 17:119, Apr., 1950.

2. Hardt, L. L., and Steigmann, Frederick: *Am. Jour. Digest. Dis.*, 17:195, June, 1950.

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3. Bralow, S. P., Spellberg, M. A., Kroll, H., and Necheles, H.: *Am. Jour. Digest. Dis.*, 17:41, Feb., 1950.
4. *New and Nonofficial Remedies*, Council on Pharmacy and Chemistry, American Medical Association, Philadelphia, J. B. Lippincott Co., 1952, p. 312.

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the intestines on a tube sounds intriguing. One must remember, however, that maintenance of any foreign body in place for days or weeks is not without danger. To mention only a few hazards: pressure necrosis, electrolyte imbalance, water and protein depletion, and knotting of the tube which, in itself, might obstruct. No doubt, advocates of the method are able to compensate for these eventualities.

Possibly the best approach to the control of adhesions is prophylactic. Adhesions can be kept to a minimum if the following aphorism is continually kept in mind: "The bigger the surgeon, the bigger the incision; the smaller the surgeon, the smaller the incision; microsurgeons make microincisions; and the finer the surgeon, the finer the suture material and armamentarium."

PHILIP THOREK, M.D.

Chicago

► TO THE EDITORS: There are many causes of intestinal obstruction, but adhesions are almost always the basis for recurrence. It has been our impression at the University of Rochester in the last three or four years that the incidence of adhesive obstruction is decreasing. This may be due in part to a decreasing number of peritoneal infections, secondary to the development and the widespread use of antibiotics.

However, there are other factors in the development of adhesions, and the marked tendency of some people to form adhesions is probably the most important considera-

tion. We are still seeing patients whose adhesions first originated before 1930. Occasionally, ten or fifteen years elapse between bouts of adhesive obstruction, although usually the interval is much shorter.

About one-sixth of our patients with adhesive obstruction have had more than one occurrence of sufficient severity to require laparotomy. In the group with recurrent obstruction, each patient has required, on the average, 4 operations. Obviously, they have presented a problem to us which has not as yet been solved. Occasionally, when the recurring obstruction is secondary to a relatively localized area of matted bowel, resection of the entire area can be done, and we have had an occasional poor risk patient under such circumstances in whom a lateral anastomosis between dilated and collapsed bowel has prevented any further recurrent obstruction.

As mentioned in a previous report from this institution, we have felt that the Noble plication offers the best chance of freedom from a recurring obstruction, although bouts of partial obstruction may follow this tedious procedure. The plication of small bowel over a tube as described by Drs. Satinsky and Kron seems an excellent procedure to us. We have used this recently in the postoperative period after the initial obstruction, but it is too early to evaluate final results.

It seems fair to emphasize that this is not a form of "medical management," but is to be used in conjunction with surgery, *after* the ob-

struction has been released surgically.

Although plication either surgically or with a tube is probably the best therapy we have to offer at the present, prevention of adhesions remains our primary problem.

CHARLES D. SHERMAN, JR., M.D.  
Rochester, N. Y.

► TO THE EDITORS: Duff has stated that on the basis of postmortem examination, peritoneal adhesions occur in 90% of all patients with a previous abdominal operation. According to Wangenstein, 30 to 40% of all cases of intestinal obstruction are due to postoperative adhesions.

In my opinion the following precautions may help to prevent recurrent intestinal obstruction caused by adhesions:

- Careful handling of tissues, especially the bowel and peritoneum, to prevent any loss of continuity of the peritoneal covering
- Eversion of the parietal peritoneum of the incision with small plain catgut
- Complete hemostasis so that no blood clotting is, or will be, present as a possible precursor of adhesions
- Peritonization, if possible, of all surfaces on the intestine and anterior abdominal wall
- Avoiding the use of talcum powder on the gloves
- Washing the gloved hand frequently in sterile water to remove any blood or debris
- Careful and accurate approximation of the tissues in gastric and intestinal resections to prevent any leakage that would invite an acute or subacute inflammatory process with the subsequent formation of adhesions
- Warm, moist, saline laparotomy

pads when examining or packing away the bowel

- Antibiotics postoperatively to suppress infections arising from contamination

- Early ambulation, when possible, or changing the position of the patient frequently while in bed.

Noble plicates the small intestine upon itself in an attempt to prevent a recurrent intestinal obstruction. The clinical results in his hands are good and he is quite enthusiastic about employing the procedure.

Cortisone, ACTH, heparin, dicumarol, and amniotic fluid have been used, but as yet nothing specific has been produced.

Considerable experimental work has been done on the prevention of abdominal adhesions, in both animals and human beings. Necheles and associates produced experimental adhesions in dogs. The number of postoperative adhesions was reduced 71% in a group of dogs in which gastrointestinal motility was stimulated by early feeding and administration of Prostigmin, as compared to a similar group in which gastrointestinal motility was depressed by starvation and repeated administration of atropine hypodermically. However, stimulation of a bowel immediately after gastrointestinal anastomosis is undesirable.

Future research may reveal a method whereby postoperative adhesions will be minimized. By so doing, recurrent intestinal obstruction will become a less prevalent condition.

ARKELL M. VAUGHN, M.D.  
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## MEDICAL FORUM

### Sodium Psylliate for Nasal Allergy\*

**QUESTION:** Is sodium psylliate injection advisable for treatment of nasal allergy?

*Comment invited from*

*M. H. Mothersill, M.D.*

*A. L. Maietta, M.D.*

*J. S. Blumenthal, M.D.*

*Theodore B. Bernstein, M.D.*

► TO THE EDITORS: Dr. John H. Childrey injects a 5% solution of sodium psylliate into the submucosa of the septum and the inferior and middle turbinates. The treatment presumably has a sclerosing effect which prevents the mucosa from reacting to released histamine. Dr. Childrey indicates that excessive use of the sclerosing solution will cause sloughing and advises treatment that is sufficiently conservative to avoid this.

The nasal mucosa has an important function. The nose is not a mere funnel through which air passes. It acts as a filter, radiator, and humidifier of inspired air. The mucous membrane of the nose is covered with a mucous blanket to which dust, bacteria, and pollen adhere. This blanket is kept in constant motion by cilia, the function of which must not be impaired.

Any treatment that opens an airway through the nose must be of such a nature that the function of the mucosa and cilia is not impaired. It is difficult to see how a sclerosing solution can be mild enough to avoid interference with function and yet sufficiently drastic

\*MODERN MEDICINE, Apr. 15, 1953, p. 124.

to overcome symptoms. Certainly the margin of safety between effectiveness and mucosal atrophy is not very great.

M. H. MOTHERSILL, M.D.  
Indianapolis

► TO THE EDITORS: The successful management of nasal allergy embodies [1] adequate specific elimination and desensitization procedures predicated upon a correct etiologic diagnosis, and [2] selected supplementary therapeutic measures intended to resolve mechanical conditions when indicated after a thorough antiallergic regimen.

Many competent allergists believe that the allergic phenomenon is fundamentally caused by a perverted immunologic action between an antigen and its specific antibody. This antigen-antibody mechanism often can be demonstrated in man by the Prausnitz-Küstner reaction or in the experimental animal by the Schultz-Dale test.

Basic therapy is directed at prevention or attenuation of the antigen-antibody reaction. Elimination of the offending allergen, or antigen, precludes the reaction because the antibody cannot react alone. When elimination is impractical or incomplete, desensitization with the specific allergen is the next procedure of choice. This therapeutic measure is believed to stimulate formation of a blocking antibody which prevents the union of the allergen and its specific antibody, thereby nullifying the fundamental allergic reaction at the source.

(Continued on page 168)

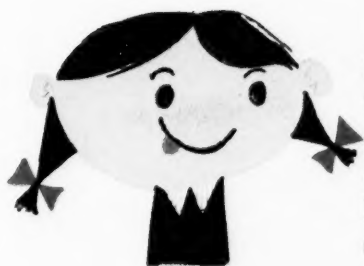
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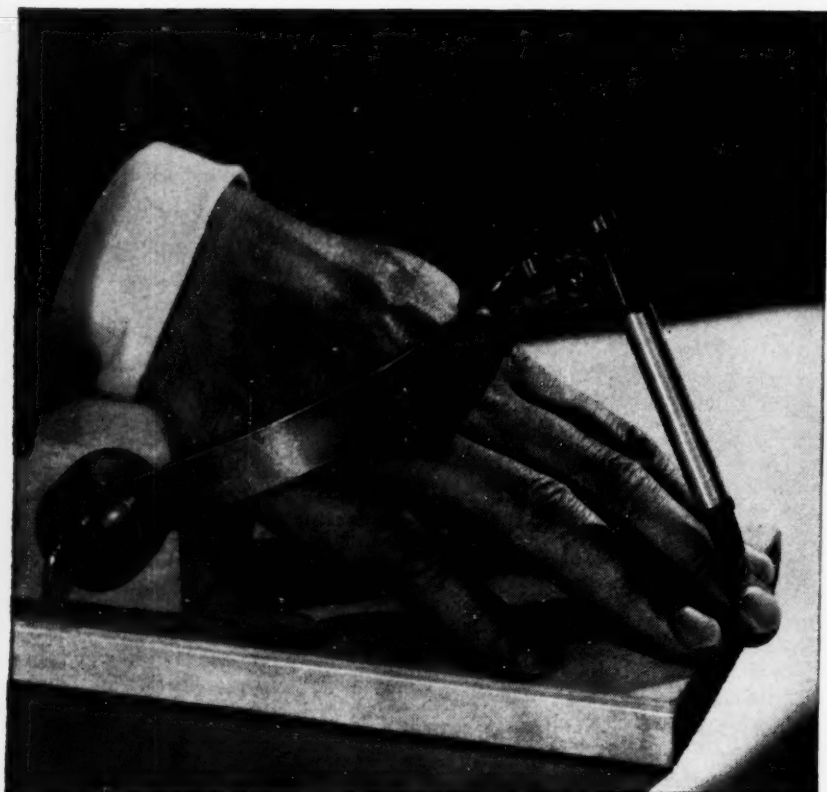
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## MEDICAL FORUM

Desensitization is more permanent.

Longstanding nasal allergy often is associated with bronchial asthma and secondary changes within the nose—boggy turbinates, nasal polyps, and insufficient drainage. In such cases, the conservative allergic approach is the keynote to successful treatment. Not infrequently with adequate antiallergic therapy, edematous turbinates return to normal, nasal polyps recede or disappear, drainage is reestablished, and asthmatic symptoms are controlled. When, however, these secondary changes are irreversible, rhinologic measures, intended to resolve these mechanical difficulties, are employed simultaneously with the primary antiallergic treatment.

Topical application of escharotics and radium, submucous injection of sclerosing agents, nasal ionization, and excision of any turbinates or polyps should be considered as supplementary rhinologic procedures to the primary allergic approach. When used alone and without regard to suitable allergic management, the salutary effect of these measures is transitory.

Sodium psyllate is a sclerosing agent, the obliterative action of which is destructive. When injected into the nasal mucosa, the tissues are shrunk by fibrous proliferating action. This sclerosing effect may be harmful to the physiology of the nasal mucosa.

The injudicious and indiscriminate employment as primary treatment in all cases of nasal allergy is neither warranted nor feasible, especially when accepted conservative measures are at hand. Further,

about 75% of patients with nasal allergy have other manifestations of allergy which must be controlled. This can best be accomplished only by allergic methods of treatment and the local use of drugs; other nonspecific measures should not be employed unless absolutely necessary.

A. L. MAIETTA, M.D.

Boston

► TO THE EDITORS: The vulnerability of the nasal mucosa to insults of varying types engenders the great incidence of altered reactivity diseases. The prevalence of nasal allergy is matched only by the multiplicity of procedures advocated for relief. No method of local therapy is indicated until a thorough allergic investigation has been made.

Local treatment dates back many years and the very lack of sustained recognition of any one method speaks for itself. These therapies have included chemical cauterization, tannic acid sprays, ionization, resorcin, trichloroacetic acid, alcohol injections, and sodium morrhuate injections.

While I do not doubt that injections of sodium psyllate, as used by Dr. Childrey, are of benefit when done in selective cases, it seems to me that a sclerosing agent, with the resulting inevitable destruction of tissues, cannot be without dangers. Furthermore, the method is palliative and may expose the patient to a further possible source of sensitivity. In the large majority of cases, careful allergic management and therapy will

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## MEDICAL FORUM

obtain, with less danger, at least as satisfactory and, indeed, more lasting results.

J. S. BLUMENTHAL, M.D.  
Minneapolis

► TO THE EDITORS: Injection of sodium psylliate as a sclerosing agent into the nasal mucosa and turbinates for the relief of nasal allergy has been done since at least 1940. Long before that, other sclerosing agents, such as phenol, alcohol, silver nitrate, trichloroacetic acid, and sodium morrhuate, had their vogue. Some were used locally, others by injection. These substances sometimes caused sloughing of the mucosa and scar formation. Infections and adhesions occurred; anosmia and sinusitis have also been reported.

Consistently gratifying results from the use of sodium psylliate do not occur. Only an occasional patient is benefited, and the agent is not generally employed.

Local manifestations of allergy are caused by basic disturbances in the function of tissue. Successful treatment depends upon a consideration of the causative factors, which can be revealed by a complete history and careful diagnostic methods.

Local treatment alone has proved inadequate in the management of nasal allergy. I would confine the use of sodium psylliate injections to those cases that do not respond satisfactorily to careful allergic management.

THEODORE B. BERNSTEIN, M.D.  
Evanston, Ill.

## Acute Disseminated Lupus Erythematosus\*

► TO THE EDITORS: I agree with Drs. Louis J. Soffer and Richard Bader that ACTH and cortisone are the best and indeed the only satisfactory treatment for disseminated lupus erythematosus, an otherwise fatal disease. Many patients have had their lives prolonged for months with the steroid hormones.

If the patients are hospitalized, ACTH should be given intravenously by continuous drip over a period of six to eight hours daily. In that way, only about one-tenth the dosage is required, with a great economic saving. Frequently, a gradual change can be made to cortisone, which can be given out of the hospital if the patient is not too ill.

Kidney damage seems to be irreversible, as does anemia, and these and the complications of steroid therapy may cause early death.

However, it has been my experience that the lupus erythematosus cells and lupus erythematosus phenomena in the blood smear frequently disappear when the patient is well controlled by the steroids.

Chronic discoid lupus erythematosus is a relatively common disease and never fatal except in the rare case that becomes systemic. Many physicians, including internists, fail to recognize the great difference in prognosis between these conditions. The steroid hormones should not be used in the chronic form of the disease.

N. M. WRONG, M.D.

Toronto

\*MODERN MEDICINE, Oct. 1, 1952,  
p. 78.



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▶ Vitamin A.....	3000 U.S.P. units
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Nicotinamide.....	10 mg.

# Diagnostix

*Here are diagnostic challenges presented as they confront the consultant from the first clue to the pathologic report. Diagnosis from the Clue requires unusual acumen and luck; from Part II, perspicacity; from Part III, discernment.*

---

## Case MM-248

### THE CLUE

ATTENDING M.D.: A 47-year-old waiter I'd like you to see has entered the hospital because of persistent headaches. He was in good health until one month ago when a sudden coughing spell was accompanied by pain behind the right eye. The pain lasted several minutes and has since recurred two or three times each day.

VISITING M.D.: Any trouble with vision?

ATTENDING M.D.: No, the patient has not had scotomas or difficulty in seeing. Also, visual fields are normal, as are the optic disks.

VISITING M.D.: You seem anxious to divert my attention from the eyes.

ATTENDING M.D.: That was unintentional. In fact, he has a small pupil and ptosis of the upper eyelid on the left side.

### PART II

VISITING M.D.: Add anhidrosis and vasodilation of the face on the left and we have Horner's syndrome. Did the pupils react to light and accommodation?

ATTENDING M.D.: Yes, although the left pupil reacted sluggishly. The

patient was able to lift the eyelid voluntarily.

VISITING M.D.: Therefore, the oculomotor nerve was not the cause of the ptosis. What is the history?



ATTENDING M.D.: There is really little else to tell. No vertigo, paresis, paresthesias, convulsions, or fainting. He has lost about 10 lb. in the last month.

VISITING M.D.: Systemic review?

ATTENDING M.D.: Negative.

VISITING M.D.: You mentioned a coughing spell with the first episode of headache.

ATTENDING M.D.: He swallowed some water "the wrong way." He has no chronic pulmonary complaints.

*(Continued on page 178)*

The  
doctor  
with the  
bedside  
manner



realizes that his great good charm is ultimately dependent on his ability to attain therapeutic response. He's never more self-assured than when prescribing Orthoxine for chronic asthma. He knows Orthoxine provides effective bronchodilation, yet exerts only 1/2000 the pressor effect of epinephrine, and so little CNS stimulation that sedatives are unnecessary.

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*For both:* repeat every 3 to 4 hours as required

<sup>\*</sup>Trademark, Reg. U. S. Pat. Off.

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'MELOZETS' look and taste like graham crackers. Each wafer contains 1.5 Gm. of methylcellulose and supplies about 30 calories. They give a sense of satisfying fullness which blunts the appetite.

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**SUPPLIED:** In  $\frac{1}{2}$  lb. boxes of about 25 wafers.

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*\*Patent applied for*

## DIAGNOSTIX

VISITING M.D.: Well, at this point, we have recurrent severe localized headaches of short duration behind the right eye and a Horner's syndrome on the left. Let's consider the causes of Horner's syndrome. Do you want to start now?

ATTENDING M.D.: To me, miosis, ptosis, and enophthalmos mean loss of sympathetic innervation to the eye. I think first of all of destruction of the superior cervical sympathetic ganglion.

### PART III

VISITING M.D.: You will be right more often than wrong with that approach. However, sympathetic innervation of the eye can be interrupted before or after as well as at the sympathetic ganglion. Also, while we're discussing, it is probably better to substitute anhidrosis for enophthalmos in describing Horner's syndrome. Anhidrosis is caused by loss of sudomotor action of the sympathetic supply to the face. Enophthalmos is probably more imagined than real, because of the ptosis. But to continue with the anatomic causes of Horner's syndrome: The lesion may be in the midbrain, cervical or upper thoracic spinal cord, anterior roots of the first 3 or 4 thoracic nerves, superior cervical sympathetic ganglion, or postganglionic sympathetic fibers along the internal carotid artery. What physical findings are of help in this case?

ATTENDING M.D.: The ears, nose, throat, and sinuses are normal. I neglected to test facial sweating.

The neck is negative. Percussion and auscultation of the chest are normal. The rest of the examination, including the neurologic, is negative.

VISITING M.D.: Just to be sure, let's examine the lungs again. (*After examining patient, the physicians meet in the corridor.*) There is a suggestion of dullness and diminished breath sounds in the left infraclavicular region, but that is not definite. What about laboratory studies?

ATTENDING M.D.: Complete blood count normal. All serologic reactions are negative. Urine clear. The sedimentation rate was moderately elevated. Here's the chest film.

VISITING M.D.: Ah, I see you have been keeping the answer to the last. The very tip of the apex on the left reveals a dense infiltration.

### PART IV

ATTENDING M.D.: The roentgenologist believes the infiltration is a superior sulcus tumor.

VISITING M.D.: Pancoast tumor is usually a bronchogenic squamous-cell carcinoma. If we can prove cerebral metastases, extirpation of the primary tumor is not advisable. Proceed along that line.

ATTENDING M.D.: (*Three days later*) Spinal fluid pressure was elevated and the protein 200 mg. per cent. The ventriculogram revealed displacement of the right lateral ventricle. Cerebral metastasis seems definite. Roentgen therapy will be tried.



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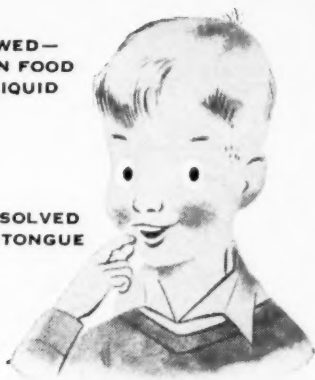
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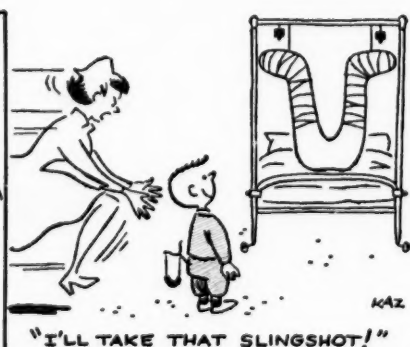
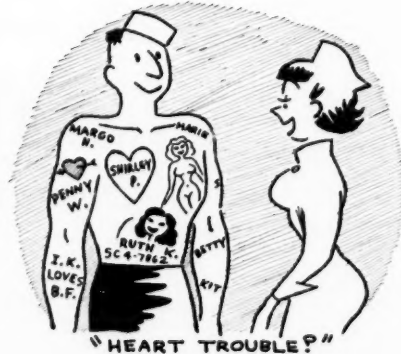
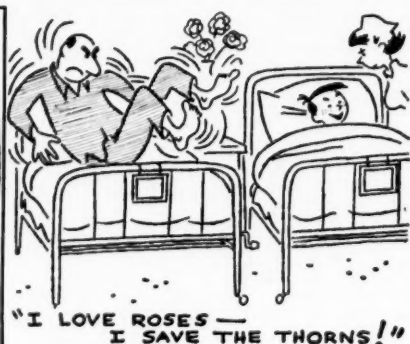
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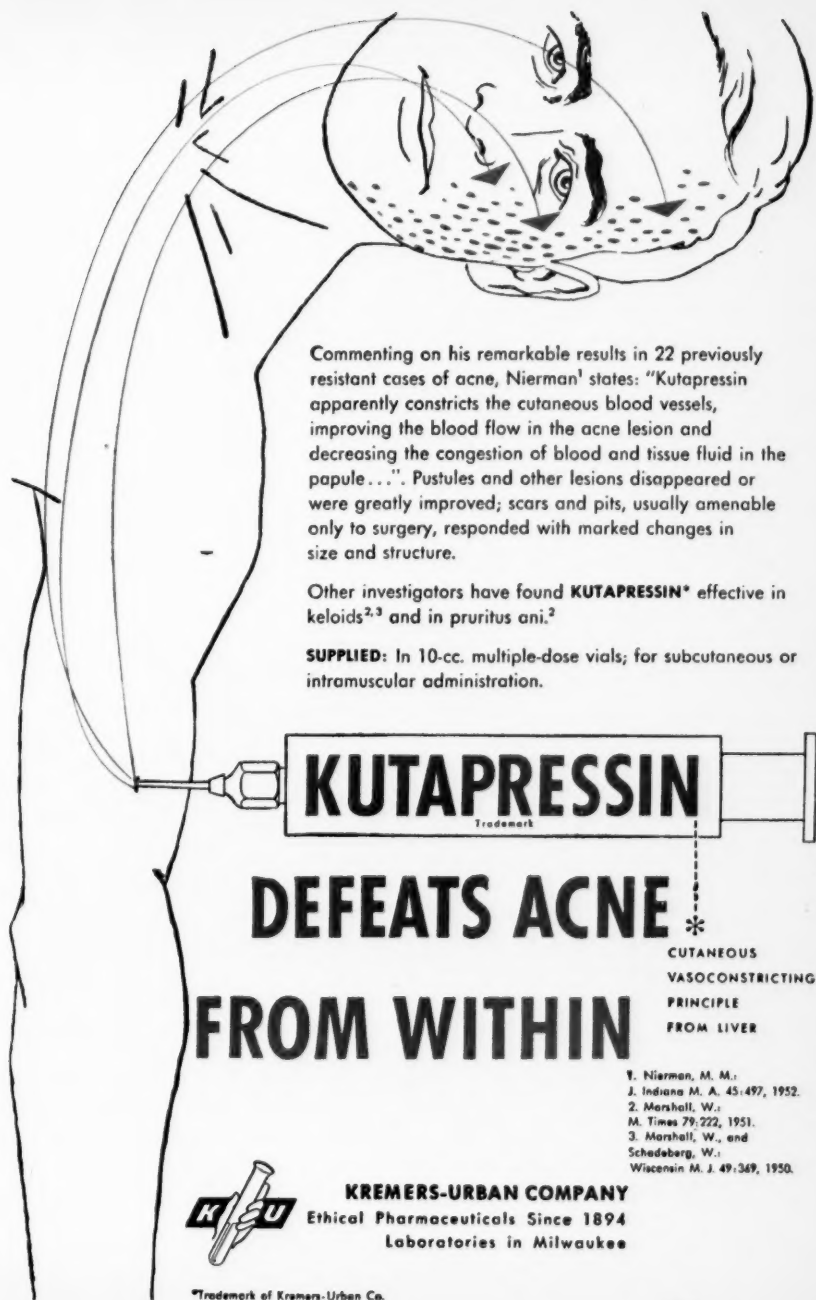
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Other investigators have found **KUTAPRESSIN**<sup>\*</sup> effective in keloids<sup>2,3</sup> and in pruritus ani.<sup>2</sup>

**SUPPLIED:** In 10-cc. multiple-dose vials; for subcutaneous or intramuscular administration.

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# DEFEATS ACNE FROM WITHIN

CUTANEOUS  
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- 1. Nierman, M. M.:  
J. Indiana M. A. 45:497, 1952.
- 2. Marshall, W.:  
M. Times 79:222, 1951.
- 3. Marshall, W., and  
Schadeberg, W.:  
Wisconsin M. J. 49:349, 1950.



**KREMERS-URBAN COMPANY**  
Ethical Pharmaceuticals Since 1894  
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# BASIC SCIENCE

## Briefs

### *Oncology*

#### **Hepatic Factor in Tumors**

Synthesis of neoplastic proteins in Wistar strain rats with Walker tumors apparently requires a hepatic factor. When such animals are given DL-lysine-E-C<sup>14</sup>, from 12 to 20% of the amino acid is found in the proteins of the tumor, report Dr. Leon L. Miller and associates of the University of Rochester, N. Y. However, completely eviscerated rodents incorporate only 1 to 5% of the substance into the tumor; the normal tissue proteins of these rats incorporate 2 to 5 times as much as intact animals. Tumor-bearing rats eviscerated except for the liver utilize as much of the amino acid as the intact animals.

Proc. Am. A. Cancer Research 1:38, 1953.

### *Diabetes*

#### **Testosterone Anabolism**

Physiologic amounts of insulin are apparently necessary for the protein anabolic function of the male sex hormone, testosterone propionate. Drs. Otakar V. Sirek and Charles H. Best of the University of Toronto find no change in levels of nonprotein nitrogen and blood sugar in depancreatized dogs given testosterone propionate after the withdrawal of exogenous insulin for twenty-four hours. Adminis-

tration of insulin to such diabetic dogs results in decrease in both levels, but no further depression can be obtained with combined insulin and testosterone treatment. In intact dogs, the administered male sex hormone lowers the non-protein nitrogen but does not change the blood sugar. Testosterone propionate does not appear to increase the amount of insulin liberated from the pancreas.

Endocrinology 52:390-395, 1953.

### *Circulation*

#### **Edema Formation**

Reduced glomerular filtration rate alone is not a decisive factor in chronic edema with forward heart failure. Dr. Jeremiah Stamler of Michael Reese Hospital, Chicago, noted the following types of response to constriction of renal arteries in dogs: [1] depression of renal plasma flow with little fall in glomerular filtration rate, sodium excretory rate, or percentage excretion of the filtered sodium load; [2] depression of the glomerular filtration rate, with corresponding drop in sodium excretory rate; [3] rarely, glomerular filtration rate reduction and disproportionate drop in sodium excretory rate, with resultant fall in percentage excretion of filtered sodium.

Federation Proc. 12:137-138, 1953.



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## BASIC SCIENCE BRIEFS

### Physiology

#### Sweating Patterns

The intensity of sweating shifts from the lower to the upper regions of the body as heat increases. Dr. W. C. Randall and associates of St. Louis University, St. Louis, observed long and short cycles of sweating and evaporation, employing desiccating capsule and iodine-starch-paper technics applied in 12 to 18 skin areas at the same time. Response to slight heat is most noticeable over the legs. At high temperatures, perspiration is most profuse on the trunk and upper parts of the body. Short two- or three-minute periods of sweating may be superimposed on long sweating cycles of ten minutes or more. Both long and short cycles may occur at the same or different times in various regions.

Federation Proc. 12:112, 1953.

### Tests

#### Chromosomal Sex Detection

Skin biopsy for detection of male or female chromosomes may be a possible means of determining definitive sex in intersex patients. Keith L. Moore and associates of the University of Western Ontario, London, Canada, report that a difference in nuclear structure according to sex in cells of the malpighian layer of the epidermis was demonstrated in 50 male and 50 female patients of normal sex development and in 2 cases of hermaphroditism. Female nuclei contain a mass of sex chromatin seldom seen in male nuclei. The sex chromatin, believed

to be derived from heterochromatic parts of the sex chromosomes, is sufficiently large to be identified when produced by the female XX chromosomes but is not distinguishable from the general particulate mass when formed by the male XY chromosomes.

Surg., Gynec. & Obst. 96:641-648, 1953.

### Obstetrics

#### Hydatid Mole in Gravidas

The high levels of urinary histidine usually found during pregnancy do not occur in pregnant women with hydatid moles, but the gonadotropic titer remains elevated as in other gravidas. Since cortisone and ACTH, but not progesterone, induce histidinuria, Dr. Roy Hertz of the National Cancer Institute, Bethesda, Md., believes that the lack of the urinary histidine in patients with hydatid mole may reflect an altered adrenal function.

Proc. Am. A. Cancer Research 1:24, 1953.



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Vitamin A	5000 units
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Pleasant tasting. No disagreeable aftertaste. Readily accepted without coaxing.

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# ... a medical Odyssey

● Views and comments of physicians who have been visitors recently to foreign countries are welcomed for publication in this department.

## Clinic in Korea

TO THE EDITORS: *Modern Medicine* has always been one of my favorite medical publications. Since I came to Korea more than two years ago I have found it just the thing for the very busy practitioner.

Since we returned to Pusan in March 1951, our outpatient charity clinic has grown by leaps and bounds. The poor refugees who crowd the hillsides in tiny rice-mat and cardboard shacks with insufficient food and clothing are easy prey to disease, which is rampant.



Figure 1

Among the children was a little fellow with Pott's disease (Fig. 1) who could stand only a few minutes or walk a few painful steps when admitted to the clinic. After treatment with a plaster cast, some vitamins, and supplementary food (Fig. 2), he climbs up the mountainside with his pals—a very happy little boy now, nine months later.

Each month more women come to the city as their husbands are taken for army service or as guerilla raids make life impossible in their section of the country. For a few weeks they wander about the streets until they can borrow, beg, or steal enough to build a tiny shack or maybe get into the refugee camps when there is a vacancy. The latter are tents without floors, crowded with families, and with no sanitary facilities. We leave the rest to your imagination and you cannot imagine it as worse than it is. Last year I spent every afternoon tramping the hillsides to visit the destitute sick, so I am well aware of living conditions.

Now my whole day is spent in clinics and a Korean doctor takes these emergency sick calls. We care for 2,000 patients daily, about 1,200 in the adult clinic and 800 in the pediatric clinic. Last winter there was a smallpox epidemic,



Figure 2

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safe,  
rapid  
control

**KOAGAMIN®**

systemic aid to faster clotting



KOAGAMIN acts directly on the clotting mechanism—in minutes not hours. Unlike vitamin K it is effective in all types of capillary and venous bleeding. And—no untoward side effect, including thrombosis, has ever been reported.

KOAGAMIN, an aqueous solution of oxalic and malonic acids for parenteral use, is supplied in 10-cc. diaphragm-stoppered vials.

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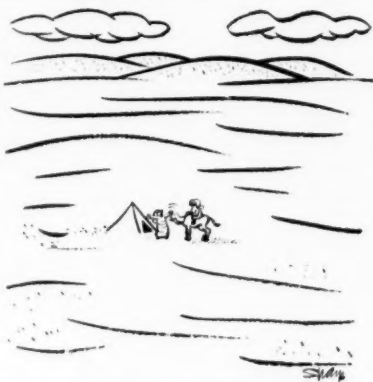
186 MODERN MEDICINE, October 1, 1953

which is winding up now. We saw over 300 children with smallpox from the age of 20 days upward.

Recently there were very heavy rainfalls, and the human waste poured down the hillsides in torrents, contaminating all water supplies. The result was a serious epidemic of typhoid, paratyphoid, and bacillary dysentery. Because of extensive immunization programs by the United Nations in schools, refugee camps, and at large, as well as because of natural immunity from former contact, the epidemic was limited largely to babies and small children. Of course, the biggest and ever-present problem is tuberculosis, which is extremely prevalent and often wipes out whole families.

So you see there is "no rest for the weary" here in Korea and no time to read extensive scientific publications, interesting as they may be. *Modern Medicine* for me, if you would be so kind as to send it. Thank you!

SISTER AGNES THERESE, M.D.  
Maryknoll Clinic  
APO San Francisco



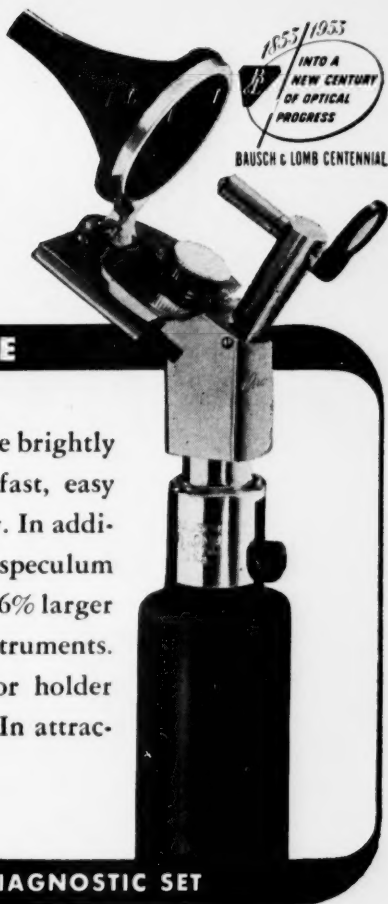
"Sorry I troubled you, Doc—I got the speck out of my eye myself!"

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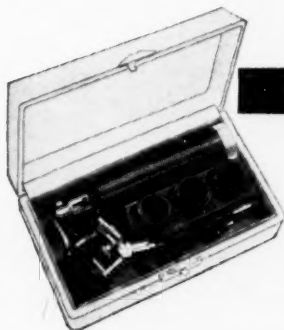


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This fine instrument provides the brightly lighted field so important to fast, easy diagnosis and so vital in surgery. In addition, the swinging arc of the speculum mount is so devised as to give a 36% larger operative field than previous instruments. Head includes tongue depressor holder and 4 specula, including nasal. In attractive, durable case.



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Designed for maximum speed and ease of use. Includes Arc-Vue Otoscope with 4 specula, and May Ophthalmoscope, battery handle and extra lamp, in durable carrying case.

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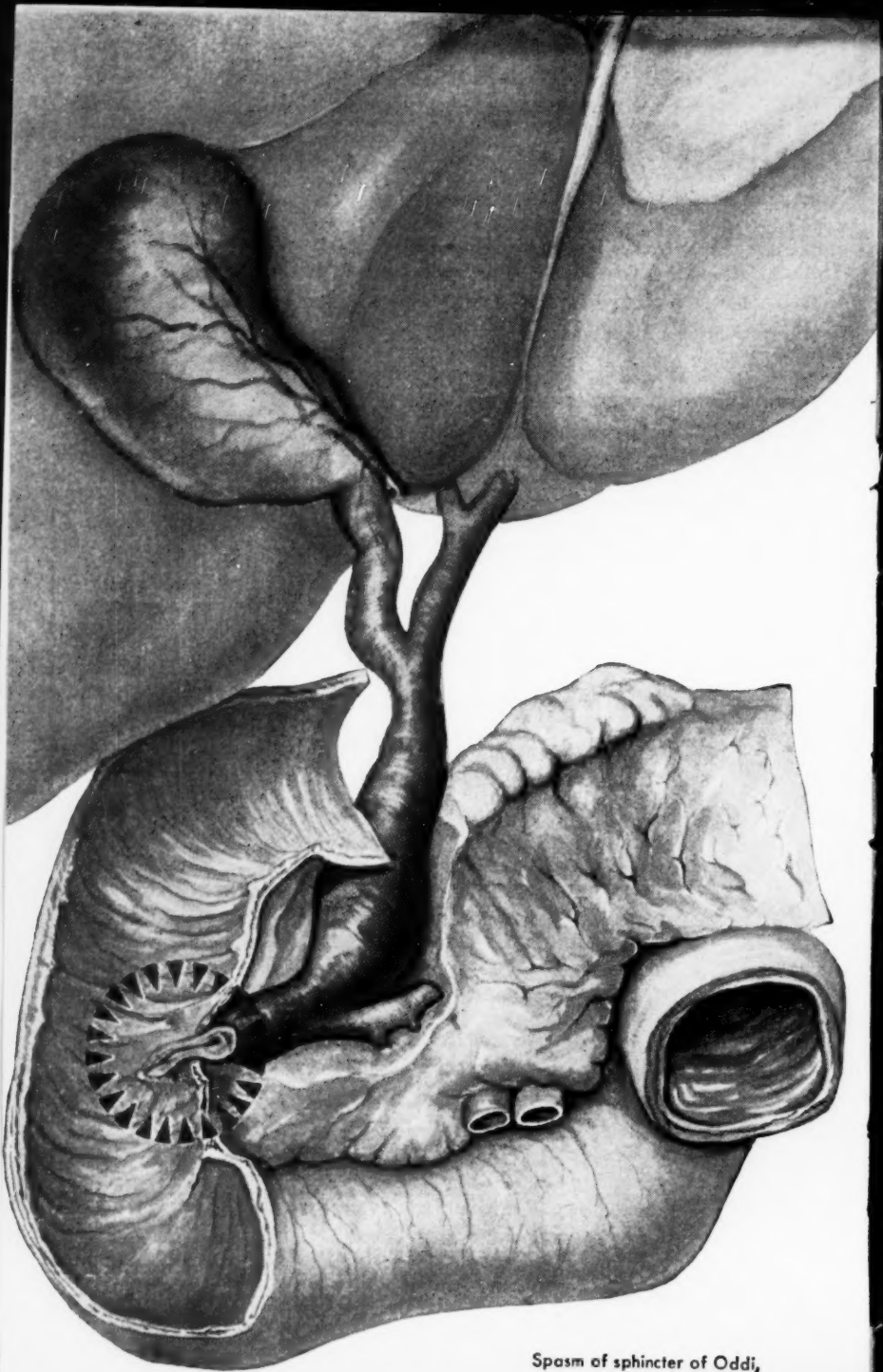
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# *Hand Diagnostic*

## INSTRUMENTS



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with ductal distention.

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An inadequate flow of bile<sup>1</sup> into the intestine, caused by such conditions as severe liver disease, biliary fistulas, biliary obstruction and congenital atresia of the bile ducts, will eventually produce severe nutritional and digestive disturbances, anemia and a tendency toward abnormal bleeding.

Ketochol stimulates the flow of thin bile to "flush" the biliary passages. Ketochol relieves nausea, vomiting, pain and other symptoms of chronic inflammation of the gallbladder by its hydrocholeretic action.

Ketochol is well tolerated. The average dose is one tablet three times a day with meals, together with a suitable diet.

Ketochol is available in tablet form, 250 mg. ( $3\frac{3}{4}$  grains) of ketocholanic acids per tablet.

## **Adjunctive Antispasmodic- Sedative Therapy**

Pavatrine® with Phenobarbital for selective control of smooth muscle spasm and for mild sedation of the nervous, tense patient is an excellent adjuvant in the management of biliary disorders. The average dose is one or two tablets three or four times daily, as needed.

Pavatrine with Phenobarbital contains 125 mg. (2 grains) of Pavatrine and 15 mg. ( $\frac{1}{2}$  grain) of phenobarbital per tablet.

1. Irvin, J. L.: The Secretion and Enterohepatic Circulation of Bile Acids: Replacement of Bile Acids in Biliary Insufficiency, *North Carolina M. J.* 13:206 (April) 1952.

**SEARLE** *Research in the Service of Medicine*

## short REPORTS

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### *Oncology*

#### **Obesity and Tumors**

Mammary tumors develop more frequently and earlier when female mice are fed high-calorie diets. Spontaneous mammary tumors appear significantly earlier in virgin C3H mice injected with gold thioglucose to increase food consumption and consequent obesity than in untreated animals. Dr. S. H. Waxler of Stanford University, San Francisco, reports that the same incidence of neoplasia is observed among these potentially obese animals kept at control weight by pair-feeding as among mice not given gold thioglucose.

Proc. Am. A. Cancer Research 1:58, 1953.

### *Steroids*

#### **Metabolism of Cortisone**

Since oral administration is effective, the metabolic activity of cortisone may be dependent on conversion to Compound F. Catabolism of adrenocortical steroids by hepatic tissue results in loss of biologic activity through reduction of the conjugated unsaturated bonds in ring A and degradation of the alpha-ketol side chain. After incubation of liver slices in a solution of cortisone, Dr. Albert B. Eisenstein of Washington University, St. Louis, is able to isolate 3 individual substances by use of pa-

per chromatography. The compound obtained in greatest amount and motility is unaltered cortisone and the product of intermediate mobility is Compound F; the least mobile fraction is unidentified.

Proc. Soc. Exper. Biol. & Med. 83:27-30, 1953.

### *Cardiology*

#### **Effective Oral Diuretic**

A carbonic anhydrase inhibitor, Diamox, may be taken orally as a diuretic agent in cases of congestive heart failure. Of 26 patients given 0.25 to 0.75 gm. three times daily for one to five days, 23 demonstrated an average urine-volume output increment of 78%, report Dr. Charles K. Friedberg and associates of Mount Sinai Hospital, New York City. In 18 cases the clinical response compared favorably with that from parenterally administered mercurial diuretics. Most of these patients also lost weight significantly. Most effective dosage schedules appear to be 0.25 gm. three times daily for two days, with courses repeated every two to seven days, or a continuous administration of 0.25 gm. of the drug once daily. Toxic manifestations of acidosis, drowsiness, and paresthesias are transient and slight. Diamox is 2-acetylamino-1,3,4-thiadiazole-5-sulfonamide.

New England J. Med. 248:883-889, 1953.

# For your OVERWEIGHT Patients



## Recommend RY-KRISP

as bread in reducing diets

Low-Calorie . . .

Whole-Grain . . . Delicious!

Only 20 calories per double-square wafer. Made of whole-grain rye, salt and water.



RALSTON PURINA COMPANY, St. Louis 2, Mo.

## HELPFUL FACTS ABOUT A NEW, USEFUL HYPOTENSIVE DRUG

'Provell Maleate,' an effective hypotensive agent, offers the following well-defined advantages:

### *Pure crystalline compound*

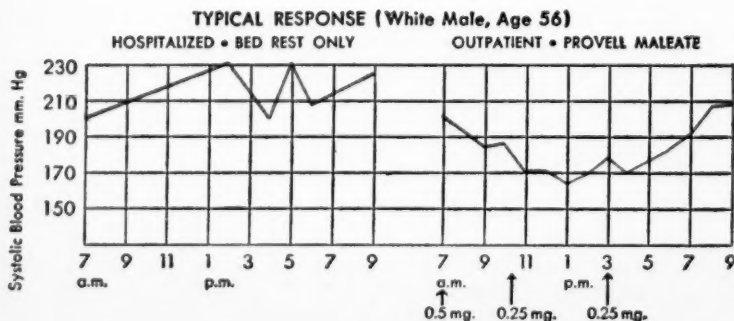
'Provell Maleate' is a pure crystalline compound obtained from *Veratrum album*. It possesses the therapeutic action of *Veratrum* in general, but permits strict and accurate control of dosage.

### *Consistent hypotensive effect*

A carefully adjusted dosage schedule produces consistent hypotensive effect without nausea, vomiting, or tolerance to the medication.

### *Increases heart efficiency*

'Provell Maleate' increases the efficiency of the heart, both directly and by decreasing the heart's work load. An investigator wrote: "Many patients that I see who have severe hypertension have some evidence of heart failure. . . . A major cause of death in hypertensives is heart failure. I like to administer a drug which effectively takes some of the load off the heart and increases the efficiency of the heart muscle."



### ***Relatively safe***

As the dosage increases, the patient experiences mild sensations of coolness around the mouth and tingling in the fingers. These precede the side-effects of nausea and vomiting and serve as helpful guides to proper dosage. Frequently, satisfactory lowering of blood pressure occurs before any side-effects appear. Vomiting acts as a "safety factor" to prevent overdosage.

### ***Acts on central nervous system***

'Provell Maleate' acts on the central nervous system. It is not a ganglion-blocking agent. Thus, it does not induce postural hypotension.

### ***Dosage***

The average total daily dose is 1 to 2.5 mg., which is usually divided into three to five doses administered at intervals of four to six hours. For maximum effect throughout the day, when activity and blood pressure are apt to be highest, Hoobler\* recommends the following schedule:

Immediately after breakfast—0.5 to 1.5 mg. Two hours after breakfast—0.25 to 0.5 mg. Four hours after breakfast—0.25 to 0.5 mg. Signs of overdosage are tightness of throat, excessive salivation, nausea, vomiting, and bradycardia.

Supplied as 0.5-mg. cross-scored tablets in bottles of 100.

Be sure to evaluate critically this important new hypotensive agent.

\*Hoobler, S. W., et al.: Ann. Int. Med., 37:465, 1952.

***Controls hypertension***  
***consistently, safely***

# PROVELL MALEATE

(Protoveratrine A and B Maleates, Lilly)



## SHORT REPORTS

### *Nutrition*

#### **Hepatic Necrosis**

Dietary necrosis of the liver may be averted by tocopherol or cystine or alleviated by aureomycin. At the University of Minnesota, Minneapolis, rats maintained on special yeast diets had 1 or more attacks of necrosis and succumbed in twenty-eight to seventy days. Apparently, 25% had cirrhotic trends. Drs. F. W. Hoffbauer and Bernadine Wittenburg report that all of 13 rats were saved by tocopherol added to food. Cystine prevented necrosis in 5 of 12, although 4 of the necrotic group died. Aureomycin merely prolonged life for a few weeks. No rats given any form of treatment became cirrhotic.

Federation Proc. 12:392, 1953.

### *Allergy*

#### **Antigenicity of Dextran**

Systemic allergic reactions in man after infusion of dextran, a plasma expander, may be caused by the antigenicity of the glucose polymer. Although nonantigenic for rabbits and guinea pigs, native dextrans derived directly from synthesis by strains of microorganisms, as well as clinical dextrans partially hydrolyzed and fractionated, elicit antigen responses in healthy human subjects, report Drs. Elvin A. Kabat and Deborah Berg of Columbia University, New York City. In individuals not previously injected with dextran, precipitins and cutaneous sensitivity of the wheal and erythema type developed three weeks after injection of 1 mg. of

dextran preparations with different ratios of 1:6 to non 1:6 linkages. Antibodies to the polysaccharide observed in preimmunization tests may be caused by ingestion of dextran in commercial sugar or to dextran-producing organisms in the gastrointestinal tract. The precipitin reaction between dextran and antidextran is of the standard type. Differences in the behavior of various antisera with native and clinical dextrans appear to result from structural variations of the dextran preparations.

J. Immunol. 70:514-532, 1953.

### *Oncology*

#### **Tissue Contact Time**

The length of time the proper concentration of an antineoplastic medicament remains in contact with the target is an important factor in chemotherapy. Dr. Howard R. Bierman of the University of California, San Francisco, and associates find that arterial infusion of HN2 and occlusion of the blood supply of the diseased part enhance the effectiveness of the nitrogen mustard against a variety of non-lymphomatous growths. In 20 patients with various lesions, the greatest tissue contact time approximated ten to fourteen minutes with doses of 5 to 30 mg. of HN2. The circulatory slowing was accomplished at operation or by catheterization with inflatable intravascular balloons. Single organs and large areas of metastatic involvement, including entire abdominal contents, have been so treated.

Proc. Am. A. Cancer Research 1:6, 1953.

# **NYLON** **elastic stockings** **at no sacrifice** **of correct** **support**

*Bauer & Black Nylons combine new beauty with established principles of correct therapeutic support*

A woman's vanity can be a formidable thing—particularly when you want to prescribe elastic stockings that give correct support and she insists on beautiful appearance.

But now you can give her the beauty she demands with the support she needs in Bauer & Black Nylon Elastic Stockings. They're fashioned to exert greatest pressure at the ankles, with pressure gradually decreasing from ankles up, gently speeding circulation.

Open toe avoids foot constriction and promotes foot comfort.

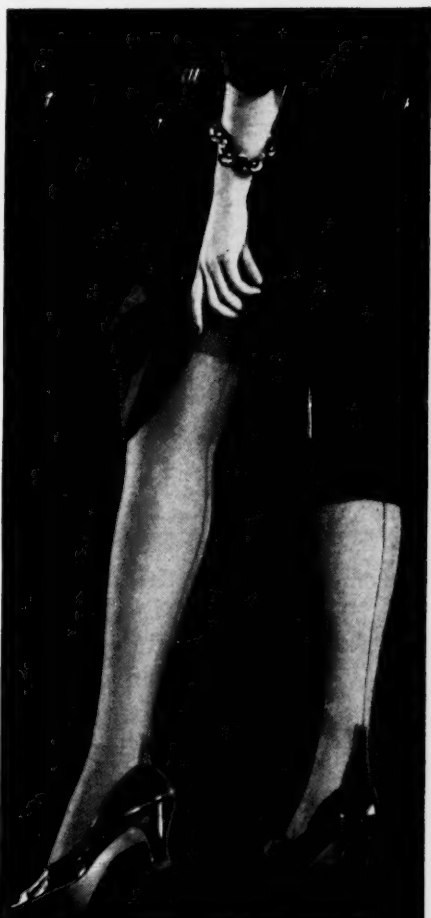
With support like this in stockings that are sheer, inconspicuous and non-discoloring, you can expect full patient cooperation.

More women choose Bauer & Black than any other elastic stocking.

**(BAUER & BLACK)**

**ELASTIC  
 STOCKINGS**

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## **NOTE THESE SUPPORT FEATURES**

**Bauer & Black Fashioned Stocking** knitted with rear-fashioning seam so that pressure is adjusted to leg contours avoiding undesirable constriction. Pressure decreases gradually from ankle up, thus gently speeding circulation.

*Shaded area indicates correct pressure pattern*



## SHORT REPORTS

### *Apparatus*

#### **Color Radiography**

Small nonmetallic foreign bodies and other details poorly defined by ordinary black-and-white radiography may be revealed by color. For example, slivers of glass buried in flesh are seen as dark tan against a light tan background. A new process described by Bernard M. Fine of Lynn, Mass., utilizes commercial films. Upon development, roentgen rays and selected alpha, beta, and gamma rays are represented in bright hues.

### *Antibiotics*

#### **Magnamycin in Amebiasis**

Symptoms of amebic colitis may be controlled and amebic colonic ulcers healed with Magnamycin therapy. Effects obtained are similar to those from terramycin or aureomycin, find Drs. W. A. Sodeman and R. C. Jung of Tulane University and Charity Hospital, New Orleans, who describe use of the antibiotic for 4 patients. Dosage was usually 2 gm. daily in divided doses for adults and 50 to 60 mg. per kilogram of body weight for children. Treatment of children was continued for only five days. In all cases diarrhea was promptly terminated and amebic lesions healed. *Endamoeba histolytica* disappeared from the stool specimens and bowel aspirates. Satisfactory results were obtained for 1 patient after terramycin had failed to control the disease. Possible toxicity, shown by vomiting and mucus diarrhea, developed in 1 case.

J. Louisiana M. Soc. 105:171-172, 1953.

### *Angiology*

#### **Cerebral Circulation**

Neither arteriosclerosis nor hypertension alone significantly affects the cerebral circulatory functions. But occurrence of the disorders together is accompanied by diminished blood flow and oxygen consumption, explain Dr. Henry A. Shenkin and associates of the Albert Einstein Medical Center, Philadelphia, after a study of 54 individuals averaging 68 years of age. Hypertension is the one readily definable factor in predicting reduction in cerebral circulation in sclerotic patients, probably because of the greater severity of arteriosclerosis, especially the arteriolar variety, in such cases. Aging alone and cerebrovascular disease apparently do not affect the utilization of oxygen or rate of flow.

J. Clin. Investigation 32:459-465, 1953.

### *Toxicology*

#### **Mentholated Cigarets**

Mentholated and nonmentholated cigarettes have the same effect on ciliated respiratory epithelium of rabbits, rats, and human beings. Excised tissue was exposed to menthol, nicotine, and both kinds of smoke in Locke-Ringer solution by Dr. N. Rakieten and associates of the South Shore Analytical and Research Laboratory, Islip, N. Y. Toxic concentrations of nicotine hastened the ciliary beat, disrupted normal pattern, and finally prevented all activity. Doses of 100 mg. per cubic centimeter were toxic within five minutes.

Federation Proc. 12:112, 1953.

**New**

## ANTIBIOTIC RECTAL CONES

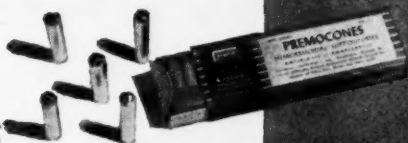
### "Premocones"

Hemorrhoidal  
Suppositories

#### ANTIBIOTIC - ANAESTHETIC

A new and superior formula which reduces incidence of infection, relieves pain and discomforts associated with hemorrhoids and minimizes anal leakage. In addition, Premocones exert a protective action by coating the inflamed hemorrhoids, thus promoting faster healing.

Packaged  
in a handy,  
easy to carry  
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**FREE**  
Physicians'  
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#### COUPON

Premo Pharmaceutical Laboratories, Inc.  
South Hackensack, N. J.

Please rush me samples of Premocones.

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## SHORT REPORTS

### Fellowships

#### American Cancer Society

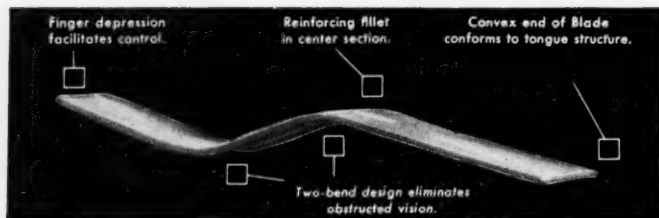
One-year renewable fellowships and traineeships, available on or after July 1, 1954, are being offered by the American Cancer Society to teaching institutions approved by the American Medical Association. School executives should apply before October 5, 1953 to Dr. Brewster S. Miller, 47 Beaver Street, New York City 4. Letters should state the number of students proposed, the funds already at hand for partial support of fellows or trainees, the type of special or general training, name of supervisor, starting date, available facilities, such as tumor clinics, and other plans for the course.

### Oncology

#### Neurofibroma Pain

Ultrasonic radiation appears to relieve symptoms of painful postoperative neurofibromas. Of 5 patients treated unsuccessfully by other methods, 4 obtained dramatic relief after ultrasonic exposure, report Drs. Irving Tepperberg and Elemer J. Marjey of Veterans Administration, New York City. The machine has an energy density of 0.5, 1, 1.5, 2, 2.5, and 3 watts per square centimeter and a treatment head of 5 square centimeters. Frequency is 1,000,000 per second. Continuous or pulsed energy output of 1:5, 1:10, or 1:20 can be used.

Am. J. Phys. Med. 32:27-30, 1953.



Because "it keeps out of the way" examination and treatment of throat and oral areas are easier for the doctor, more comfortable for the patient. Only absolutely smooth and perfect blades are packed.

## Have YOU tried it?

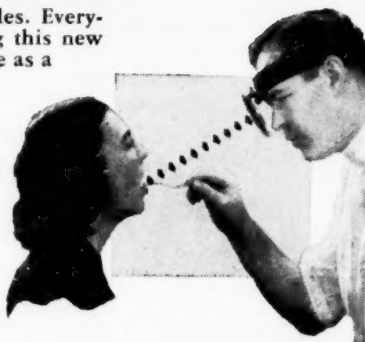
Ask your supply dealer or write for samples. Everywhere in America doctors are acclaiming this new OWD Riteshape Disposable Tongue Blade as a revolutionary advancement in its field.

**OWAL WOOD DISH CORPORATION,**  
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Chicago 5, Illinois



**Riteshape**  
**TONGUE BLADE**



**FIBERGLAS\***  
**REPORTS TO THE**  
**PROFESSIONS**

---

*Fiberglass lead-glass gown described here being worn by an X-ray technician.*

## **Fiberglas Cloth Gown Protects Radiologists Against Harmful Rays**

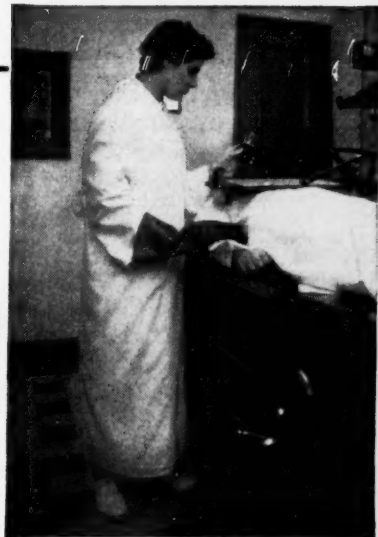
According to long-term studies, leukemia has eight times the incidence among radiologists as among physicians in general.

Scattered radiation is suspected as a factor.† Arms, shoulders and lower legs are not adequately protected by the usual lead-rubber aprons, and one may speculate that continued slight radiological insult causes a leukemic condition among operators with delicately balanced hemopoietic systems.

### **Fully protective gown developed**

To protect the hitherto-exposed parts, Dr. V. W. Archer and associates worked with Owens-Corning Fiberglas Corporation and fabricated a gown of lead-glass cloth which protects all of the body that needs protection. It transmits approximately one tenth of the tolerance dose and is highly resistant to the beta rays of atomic fission.

Suspended from the shoulders and belted in at the waist, the lead-glass gown is comfortable to wear and allows complete freedom of action. Weight of the medium-size, single-layer gown is 3 lbs., 9 ozs. Such garments are



available from Bar-Ray Products, Inc., 209 25th Street, Brooklyn, N. Y.

Inert, inorganic, nontoxic, non-allergenic, nonsensitizing, chemically and dimensionally stable . . . Fiberglas fibers produce no harmful effect on human tissue.

### **Literature and samples supplied**

Owens-Corning Fiberglas Corporation supplies adequate working samples of standard Fiberglas products to qualified persons engaged in research. For samples or your copy of *Pioneering Uses of Fiberglas Materials in Medicine*, write Owens-Corning Fiberglas Corporation, Dept. 29-J, Toledo 1, Ohio.

★ ★ ★ ★

†Archer, Vincent W., M. D., et al. Protection Against X-ray and Beta Radiation—Lead Glass Fabric. J.A.M.A. 148:2 (Jan. 12, 1952), pp. 106-108.



\*Fiberglas is the trade-mark (Reg. U. S. Pat. Off.) of Owens-Corning Fiberglas Corporation.

## SHORT REPORTS

### *Angiology*

#### **Vasa Vasorum Activity**

Epinephrine contracts the vasa vasorum of carotid arteries in swine, acetylcholine and histamine do not, although all 3 drugs constrict the arterial wall. Acetylcholine tightens vasa vasorum of human and animal coronary arteries, but epinephrine and histamine are inactive. Pitressin shrinks the circulatory vessels of carotids and coronaries of swine and of coronaries in human beings. Epinephrine or thyroxin alone does not affect the vasa independently but together cause prolonged contraction. Serotonin constricts carotid and coronary arteries of swine. Vasa physiology was investigated at University of Rochester, N. Y., by Dr. Durwood J. Smith, who employed angioplethysmographic technique.

Federation Proc. 12:133-134, 1953.

### *Biochemistry*

#### **Improved Fibrinolytic Agent**

Treatment with sodium hypochlorite diminishes the hypotensive effect and increases the proteolytic action of commercial trypsin. Capacity to digest casein in vitro is increased 50% and hypotensive response in dogs is decreased 96% by low temperature incubation with 0.11 gm. of sodium hypochlorite per gram of trypsin. Increased proteolytic activity is also imparted to the acetone precipitate of plasma by in vitro addition or parenteral injection of the treated enzyme. Trypsin treated with hypochlorite possesses pronounced thromboplas-

tic properties. If proteolytic and hypotensive properties of trypsin can be adequately separated, Dr. Donald E. Bowman of Indiana University, Indianapolis, believes that the enzyme might become useful as an agent for the elimination of protein debris and the digestion of fibrin in vivo. Heparin in a 1:1 ratio has no adverse effects on trypsin and may be used to prevent fatal embolism during intravenous injection of the enzyme.

Proc. Soc. Exper. Biol. & Med. 83:242-245, 1953.

### *Anticoagulants*

#### **Arterial Thrombi Absorption**

Recanalization of thrombosed arteries can be promoted in rabbits by administration of anticoagulants. A dicumarol, ethyl biscoumacetate (Tromexan), as a suspension in methylcellulose in daily oral doses of 100 to 300 mg. per kilogram of body weight, was given twenty-four hours after formation of thrombi in rabbits to maintain low prothrombin levels. Femoral arteries had been occluded by the introduction of thrombin to produce a coagulum and by morrhuate to damage the endothelium in a manner simulating human arterial occlusion. Arteriographic and autopsy data demonstrated an average recanalization period of three and one-fourth weeks for the treated animals, while arteries in untreated animals were still occluded after several months, report Dr. H. Payling Wright and associates of University College Hospital, London.

Brit. M. J. 4818:1021-1023, 1953.

# TO ELIMINATE NERVOUS ABNORMAL DESIRE TO EAT...

Specify

# Biphetacel

EFFECTIVE FOR BOTH  
DRUG RESISTANT  
AND  
DRUG SENSITIVE  
PATIENTS

BETTER  
TOLERATED

MAKES  
THYROID  
UNNECESSARY

## Exclusive 1:3 L/D ratio

"... Biphetacel has been tested recently with excellent results. It contains the 1:3, l/d ratio of amphetamine phosphate together with methyl atropine nitrate (Metropine®) and sodium carboxymethylcellulose (to reduce constipating effect of amphetamines). It has been administered to 236 overweight patients over an average time of six weeks. The responses have been classified according to the patients' subjective feelings in regard to appetite suppression, as follows: 14 patients—no effect; 30 patients—slight effect; 105 patients—satisfactory effect; 87 patients—excellent effect..."

S. C. Freed, M. D.—Newer Concepts in Treating Obesity, GP, Vol. VII, No. 1, Jan. 1953

... small dosage

### Low Treatment Cost

DRUG RESISTANT "Vagotonic" patients,  
1 tablet 1/4 to 1 hr. before meals

DRUG SENSITIVE "Sympathicotonic"  
patients, 1/2 tablet 1/4 to  
1 hr. before meals

### Each scored tablet contains:

Racemic Amphetamine  
Phosphate Monobasic ..... 2.5 mg.  
Dextro Amphetamine  
Phosphate Monobasic ..... 5 mg.  
Metropine® methyl atropine  
nitrate, Strassenburgh ..... 1 mg.  
Sodium Carboxymethylcellulose ..... 200 mg.

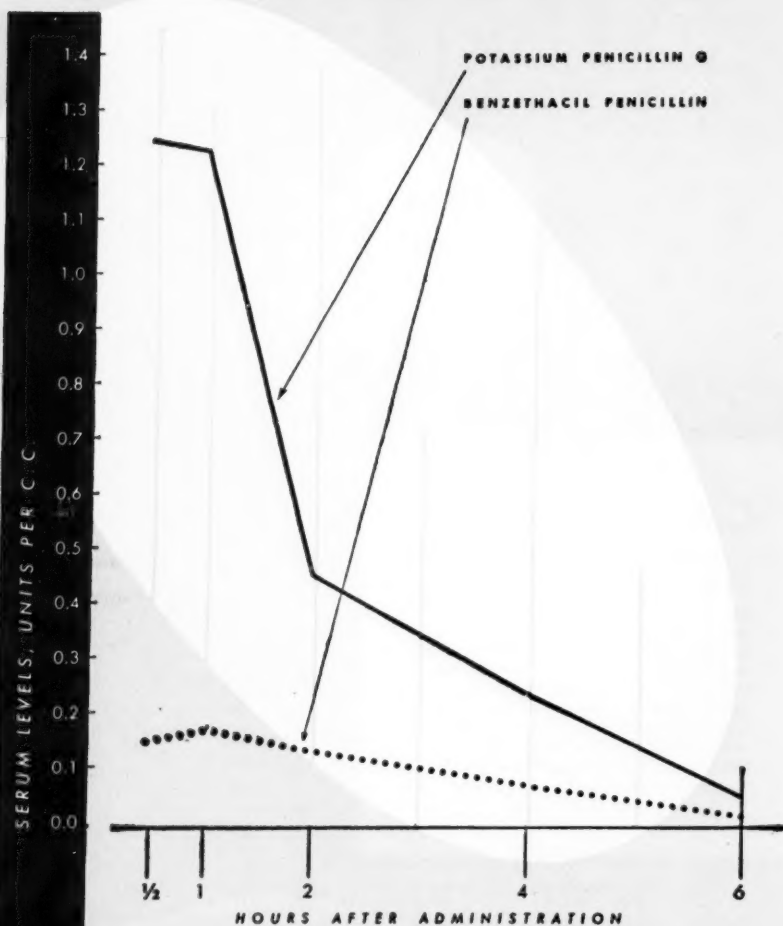
Available on Prescription at  
All Leading Pharmacies

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IN ORAL PENICILLIN THERAPY . . .

*Much Higher Initial Peaks*  
*More Prolonged Effective Blood Levels*



COMPARISON OF SERUM LEVELS OBTAINED FROM SINGLE ORAL  
DOSES OF 300,000 UNITS OF TWO PENICILLIN PREPARATIONS

Adapted from Foltz, E. L., and Schimmel, N. H.

Several very recent studies on penicillin plasma concentration and urinary recovery indicate that potassium penicillin G is the penicillin compound most ideally suited to oral medication.

Following oral administration of the two compounds in equal dosage, Foltz and Schimmel<sup>1</sup> observed a considerably higher initial level and a more prolonged effective serum concentration with potassium penicillin G than with benzethacil.

Boger and co-workers<sup>2</sup> found no insoluble salt of the antibiotic to be superior to potassium penicillin G.

# DRAMCILLIN

Potassium Penicillin G

**DRAMCILLIN** presents the established effectiveness and safety of pure potassium penicillin G in an unusually palatable form.

**A DRAMCILLIN PRODUCT FOR EVERY DOSAGE RANGE:**

## **DRAMCILLIN**

100,000 units\* per teaspoonful (5 cc.)

## **DRAMCILLIN-250**

250,000 units\* per teaspoonful (5 cc.)

## **DRAMCILLIN-500**

500,000 units\* per teaspoonful (5 cc.)

## **DROPCILLIN**

50,000 units\* per dropperful (0.75 cc.)

*Also:*

Dramcillin-250 with Triple Sulfonamides

Dramcillin with Triple Sulfonamides

Dramcillin-250 Tablets with Triple Sulfonamides

1. Foltz, E. L., and Schimmel, N. H.: *Antibiotics & Chemotherapy*, 3:593-599 (June) 1953.

2. Boger, W. P.; Bayne, G. M.; Carfagno, S. C. and Gylfe, J.: Scientific Exhibit, A.M.A. Convention, New York (June) 1953.

\*buffered crystalline  
penicillin G potassium

**WHITE LABORATORIES, INC., KENILWORTH, N. J.**

# NEOCYLATE<sup>Trademark</sup>

with COLCHICINE

NEOCYLATE<sup>with COLCHICINE</sup>

**when the findings  
suggest  
gouty  
arthritis**

**for specific pain relief . . .**

**increased uric acid  
excretion**

**in both acute  
and chronic stages**



Each Entab<sup>®</sup> (enteric-coated tablet) contains:

Sodium Salicylate . . . 0.25 Gm. (4 gr.)

Para-Aminobenzoic Acid . . . 0.25 Gm. (4 gr.)

Ascorbic Acid . . . 20.0 mg. (1/2 gr.)

Colchicine . . . 0.25 mg. (1/250 gr.)

**SUPPLIED:**  
Bottles of 200, 500, and 1000 yellow, capsule shaped Entabs.

Samples and literature available to physicians on request

**THE CENTRAL PHARMACAL CO.**  
Products Born of Continuous Research  
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## Pediatrics

### Unidentified Virus in Poliomyelitis Case

A previously unidentified virus has been isolated from the feces in a suspected nonparalytic case of poliomyelitis. Immunologically distinct from poliomyelitis agents, the virus, labeled Mack, produces fibroblastic degeneration that is morphologically indistinguishable from damage caused by recognized poliomyelitis strains. Dr. Alex J. Steigman and associates of the University of Louisville, Louisville, Ky., find the agent to be of low virulence in monkeys, producing no typical pathognomonic lesions. A high titer of specific neutralizing antibodies developed during the convalescence of the child who had the Mack virus, although no poliomyelitis antibodies were demonstrable. Adult sera and pooled human gamma globulin also contained specific antibodies against the virus.

Proc. Soc. Exper. Biol. & Med. 83:200-204, 1953.



"I'll call you back, Elsie. The doctor wants me to hang up."

### Cardiology

#### Electrocardiograms after Vagal Stimulation

Cardiac arrest caused by vagovagal reflex during intrathoracic procedures is less common with satisfactory anesthesia than previously supposed. Electrocardiograms of 30 patients with inoperable bronchogenic carcinoma made before, during, and after palliative transection of the homolateral vagus nerve just below the origin of the recurrent laryngeal nerve indicated relative infrequency of cardiac changes secondary to vagal stimulation, report Dr. Douglas R. Morton of New York City and associates of the Ohio State University, Columbus. The intact vagus nerve and the proximal and distal portions of the divided vagus were electrically stimulated in 12 patients. Only 2 patients had cardiac changes secondary to vagal stimulation; the changes were transient and of minor nature. Anoxia is probably the most important factor in the pathogenesis of cardiac arrest and cardiac irregularities occurring during intrathoracic procedures.

Surg., Gynec. & Obst. 96:724-732, 1953.

### Meetings

#### American College of Cardiology

The fall meeting of the American College of Cardiology will be held at the Hotel Statler in Cleveland, November 6 to 7, 1953. The topic of the meeting will be congenital heart disease. Speakers will discuss various physiologic findings and methods of diagnosis and surgical treatment. Any further information may be obtained from the Secretary, Dr. Philip Reichert, 480 Park Ave., New York City 22.

## NEOCYTEN

Trademark

Analgesic • Muscle-Relaxant



to abolish  
the pain-spasm  
cycle

in neuromuscular  
disorders

NEOCYTEN

In each NEOCYTEN® Entab®:

For Potentiated Analgesia

Sodium Salicylate . . . 0.25 Gm.

Para-Aminobenzoic

Acid . . . . . 0.25 Gm.

Ascorbic Acid . . . 20.0 mg.

For Safer Cholinergic Action

Physostigmine

Salicylate . . . . . 0.25 mg.

Homatropine

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SUPPLIED:

Bottles of 200, 500, and 1000

Entabs (enteric-coated tablets).

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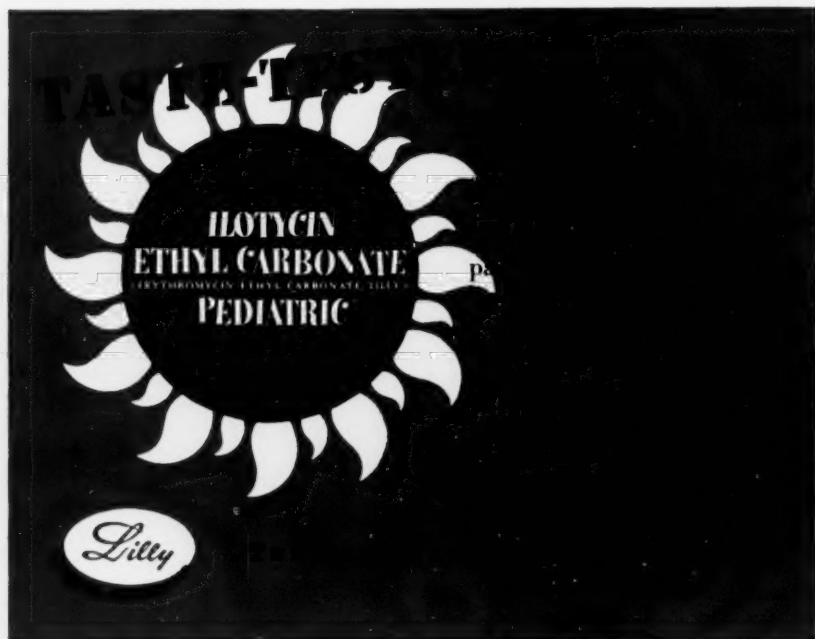
## SHORT REPORTS

### *Ophthalmology*

#### Recording of Nystagmus

A method of electrical recording of nystagmus and voluntary eye movements is available and may be adaptable to routine examination of patients. Procedures for measuring nystagmus now in use, including cupulometry, are difficult to apply and uncertain in differential localization, find Drs. Helge Hertz and Niels Riskaer of Sundby Hospital and Rigshospitalet, Copenhagen. The electric registration may be used to investigate quantitatively the sensitivity of the ampullar cristae, the function of the vestibular nuclei, the coordination of eye movements, and the sensa-

tion and after-sensation of turning. On a revolving chair provided with an adjustable headpiece and a tent to exclude light, 4 slip-rings are mounted with carbon brushes for transmission of impulses picked up from 4 lead electrodes affixed to the subject's face. The waves are led to a push-pull amplifying system driving 3 ink writers devised for electroencephalography. A fourth writer is used as an indicator pen. A commutator on the shaft of the chair indicates every 60° turn. Rotation is achieved by a motor connected with a belt to a bicycle wheel attached to the chair. A phonograph motor operates a transformer controlling accelerations. Arch. Otolaryng. 57:648-657, 1953.



for *real relaxation*



**SECO**

*in the tense, anxious, restless patient*

each tablet of **SECONESIN**  
contains:

mephenesin . . 400 mg.  
secobarbital . . 30 mg.

average dose: 1 tab. t.i.d. p.c.;  
1 or 2 tabs. at night if needed

**samples to physicians on request**

**SECONESIN** combines the safe modern relaxant, mephenesin, with mild, sedative, secobarbital, to give a more complete feeling of gentle sedation and pleasant relaxation than is possible when either drug is used alone.

with **SECONESIN**, patients relax but stay alert mentally, experience a feeling of well-being, a relaxation of mental and nervous tension by day which helps them relax into refreshing natural sleep at night.

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## SHORT REPORTS

### Virology

#### Antiviral Antibiotic

Netropsin, isolated from culture filtrates of *Streptomyces netropsis*, has pronounced therapeutic effect on vaccinia infections in mice. Many substances active against the viruses of the psittacosis-lymphogranuloma group are also antibacterial or antirickettsial, but few agents are antagonistic to members of the order *Virales*. When vaccinia infections are induced in mice by intracerebral inoculation, Dr. F. M. Schabel, Jr., and associates of the Southern Research Institute, Birmingham, Ala., find that good therapeutic effects are obtained from solutions of netropsin given intraperitoneally. The antibiotic is

ineffective in animals infected with the microorganisms of feline pneumonitis, influenza, Western equine encephalomyelitis, or poliomyelitis. *Proc. Soc. Exper. Biol. & Med.* 83:1-3, 1953.

### Pediatrics

#### Course in Allergies

Certified or qualified pediatricians are offered a course in pediatric allergy, to be given each Wednesday from November 4, 1953 to May 31, 1954 by Dr. Bret Ratner. A year's research fellowship in the same subject beginning January 1954 is also available. Those interested may apply to the Dean, New York Medical College, 106th St. and Fifth Ave., New York City.

## Rational Mouth Hygiene...

**LAVORIS**  
REG. U.S. PAT. OFF.  
**MOUTHWASH  
and GARGLE**

Lavoris does not depend upon the questionable efficiency of strong germicidal agents. It has a more rational action—it coagulates and removes mucus accumulations and germ-harboring debris. Furthermore, its astringent, invigorating action will improve the tone and resistance of the tissues to bacterial invasion.

A PRODUCT  
OF MERIT FOR  
50  
YEARS

**THE LAVORIS COMPANY, Minneapolis, Minn.**

# THE EFFECT OF *Synthetic Detergents* ON SKIN

## Synthetics—their vital role today

In the short space of five years, synthetic detergents have revolutionized American household washing habits. Synthetics give superior performance in hard water, leave clothes and dishes demonstrably cleaner, give better sudsing, and leave no dulling film as soaps usually do. Women have been quick to appreciate these advantages. Thus, while at the start of 1948 synthetics accounted for less than 10% of the "laundry soap" business, by the end of 1952 they ac-

counted for over 70%. In fact, Tide, the leading synthetic detergent, now outsells *all* washday soaps combined.

Since detergents are now used in practically every American home, it is natural that when a physician sees a case of hand dermatitis, he might be likely to associate this condition with the use of synthetic detergents. Their very newness and tremendous popularity make synthetics apt to be suspect in many cases of dermatitis where they actually are not involved.

## The effect of TIDE on skin

Procter & Gamble, makers of Tide as well as many other synthetics and soaps, constantly test washing products in a continuing program designed to measure their effect on skin. In addition to the routine patch test and arm-immersion test, Procter & Gamble has conducted under careful medical supervision, extensive clinical and home-usage tests which prove Tide's mildness to hands.

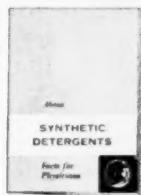
The results of all this extensive testing have established that Tide is as mild as any general purpose soap and *milder* than any other leading synthetic detergent. This means that the majority of women are as little affected by Tide as by the all-purpose package soaps they may have used in the past, and of all synthetic detergents on the market today, Tide is actually mildest.



FOR FURTHER INFORMATION... send for free booklet, "About Synthetic Detergents — Facts for Physicians." Write: The Procter & Gamble Co., Box 687 F, Cincinnati 2, Ohio.

## TIDE...

America's largest-selling washday product—  
milder than any other synthetic detergent!



## SHORT REPORTS FROM ABROAD

### FRANCE

*Hibernation for War Casualties.* Artificial hibernation or potentiated anesthesia is a recently developed procedure for the general slowing of vital functions. Apart from use in surgery, proponents claim that the method has therapeutic benefits as well. In a paper read at the French Academy of Surgery, Dr. Nicolle and associates describe trial of this method in Indochina for 24 severely shocked, toxemic, or hyperthermic patients selected from among 651 wounded. Mortality for the group given hibernation was 30%, a pronounced improvement over the statistical chances of a comparable group.

### RUSSIA

*Cartilage Graft in Osteomyelitis.* Bone defects in cases of chronic osteomyelitis may be successfully filled with conserved cartilage. Having low metabolic and circulatory requirements, cartilage is less susceptible to infection and ossifies faster than other tissues and thus allows a better take. Dr. A. G. Fedomenkoff of the Central Institute of Hematology, Moscow, stresses that before the graft is attempted the patient should be properly prepared—the infected focus should be cleaned out and the pa-

tient's general condition adequately built up.

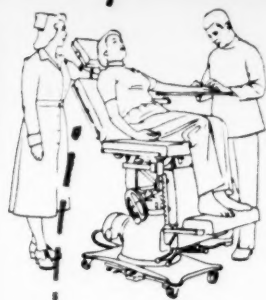
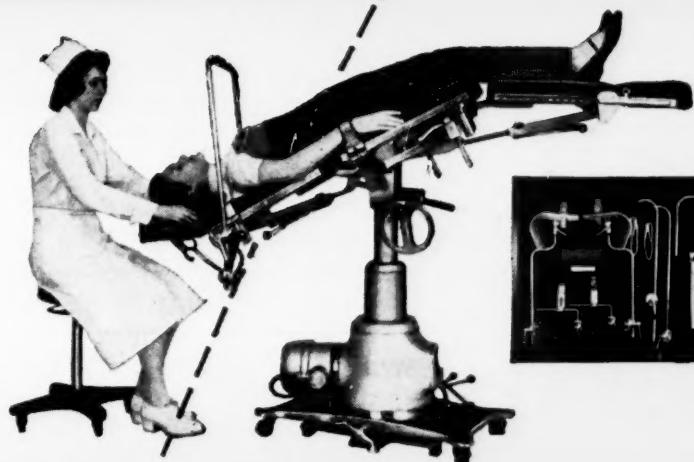
The cartilage is taken aseptically from the ribs of fresh cadavers and can be kept for about three months in a solution of dextrose and sodium chloride to which sulfonamides and an acridine derivative are added as preservatives.

In the operation, the osteomyelitic cavity is packed tightly with small pieces of the cartilaginous transplant. Penicillin, 300,000 units in 5 cc. of saline, is sprayed over the filled cavity, the wound is closed, and a cast is applied for immobilization. Postoperatively, adequate antibiotic therapy and small repeated blood transfusions help to prevent infection.

The results for 26 patients who had this treatment were encouraging. No recurrences were noticed during twenty-four months of observation; ossification was usually complete within approximately twelve months.

### SWITZERLAND

*Steroid Excretion in Tuberculosis.* The urinary excretion of 17-ketosteroids and corticosteroids is usually diminished in patients with tuberculosis. The more severe the disease, the greater the decrease, often reaching less than 40% of normal, find Drs. Rudolf Abderhalden and Gertrud Abderhalden of the Swiss



Greater flexibility, ease of operation and a motor-driven, hydraulically elevated base are outstanding features of the Ritter Medium Surgery Table. Completely equipped for safe use in the operating room, the Medium Surgery Table has an explosion-proof motor approved by the Underwriters' Laboratories, Inc., conductive rubber casters, brakes and static-conductive rubber covers.

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**Ritter**

## FROM ABROAD

Academy of Medical Sciences, from a study of 340 tubercular hospitalized patients.

Values on the day of admission are usually high, indicating a factor of psychic excitement. In the initial stages of tuberculosis, the decrease is slight, often remaining on the lower border of normal; in terminal stages the values become extremely low. Increase in ketosteroid excretion is usually indicative of a favorable evolution of the disease.

Changes in the excretion of corticosteroids ordinarily parallel those in the 17-ketosteroids.

### AUSTRIA

*Treatment of Psychoses.* The results of electroshock therapy for the psychoses may be improved by simultaneous administration of pantothenic acid and nicotinamide.

Dr. Herman Lenz of the Brothers of Mercy Hospital, Linz, describes 18 patients with paranoid schizophrenia or depressive or lactation psychosis who had shown little if any improvement after 4 to 6 electroshock treatments. However, when nicotinamide and pantothenic acid were given intravenously daily for three weeks, the improvement after electroshock was remarkable.

Since abnormalities of glucose metabolism and acetylcholine formation are important in the nervous tissue of psychotic patients, the good effects from dosage with nicotinamide and pantothenic acid may arise from the improved metabolism of the nervous tissue. The

vasodilatory effects of nicotinamide probably help also to improve the blood supply to the brain cells. Thus the good effects of electroshock therapy seem directly related to improved brain metabolism.

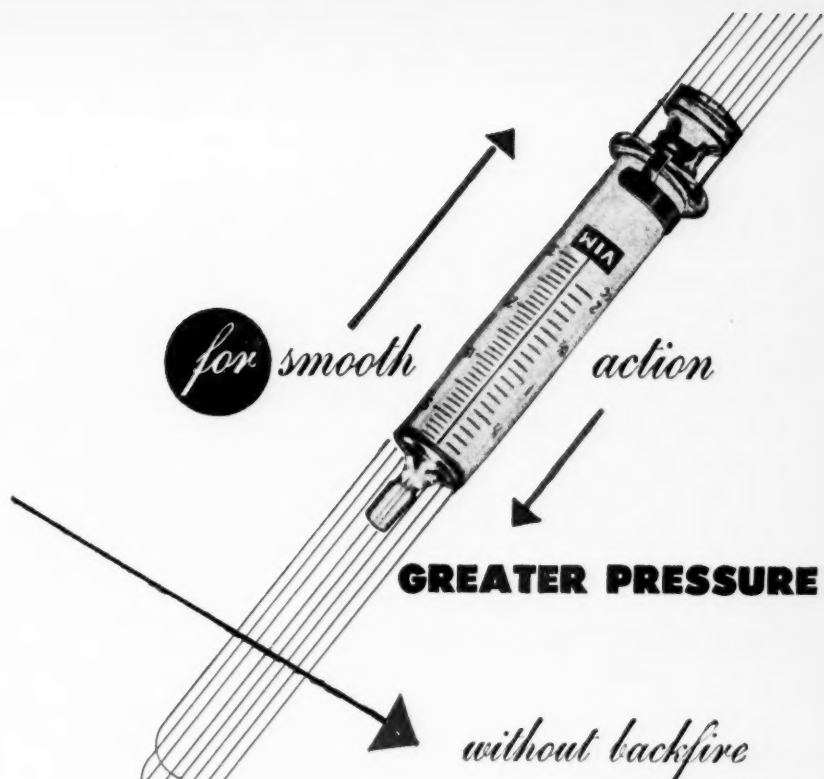
### MEXICO

*Histidine for Alopecia Areata.* Local and intramuscular injections of histidine combined with use of ultraviolet rays may be successful in treatment for alopecia areata. Dr. J.-F. Brun describes results with 48 patients between 18 and 62 years of age; 28 were women. In 32 of the cases in which no etiology could be found for the disorder, baldness completely disappeared after therapy in 17 and hair was partially restored in 4 others.

The general treatment consists of intramuscular injections of 4% solution of histidine hydrochloride and vitamin B. Locally, the 4% histidine hydrochloride solution is injected subcutaneously under the lesion, the amount varying with the extent of the baldness. Desquamation, if necessary, is obtained by ultraviolet rays or by freezing with ethyl chloride or carbon dioxide two or three times a week.

In most cases, regrowth of hair starts after a few applications. If no improvement appears after about eighteen treatments, the therapy is abandoned.

Treatment of concomitant infections, such as diseases of the digestive tract or hormonal disorders, is necessary to improve chances for cure with alopecia areata.



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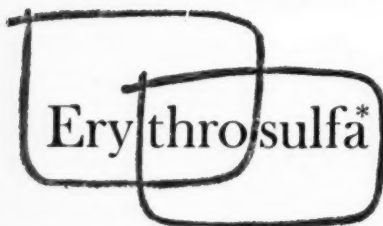
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## ARGENTINA

*Oxytocic Action of Sparteine.* Intravenous sparteine sulfate may be of use in parturition. The oxytocic effect of the compound is superior to that of pituitary extracts, find Drs. Rozelio Caso and Eugenio Korembli of the Instituto de Maternidad, Buenos Aires. In the dosage used, contractions are not initiated but the force of the physiologic contraction is increased. Relaxation between contractions is unaffected. Sparteine sulfate was administered slowly in 101 deliveries when the cervix was moderately dilated and the bag of waters ruptured—intact bags being ruptured mechanically. No harmful side effects were observed. Sparteine is particularly effective for multiparas.

## GERMANY

*Refertility Procedures.* Fertility can sometimes be restored after previous sterilization operations. Though intervention is not always successful, chances are best for young women and if the time interval after the sterilization is short.

Dr. Karl Traenckner of the Academy for State Medicine, Hamburg, reports 52 cases in which refertilization operations were attempted; 9 of the women conceived. However, 3 had extrauterine pregnancies and 1 a miscarriage.

The women had been sterilized by force of eugenic laws enacted before 1944. The operations performed for sterilizations were tubal crush or ligation, section, or partial resection of the tubes.

Whenever possible, refertilization was attempted by tubouterine im-

(Continued on page 218)

NOW—AN ENEMA THAT'S

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FOR EVERY PATIENT

(even in heart cases)



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4.87 grams Disodium Phosphate and  
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**NOW** a really effective treatment

**for Seborrheic Dermatitis of the scalp  
... keeps scalp free of scales for one to four weeks**

In clinical trials with 400 patients<sup>1,2,3</sup> SELSUN Sulfide Suspension provided *complete control* in 81 to 87 percent of all cases of seborrheic dermatitis . . . and in 92 to 95 percent of cases of mild seborrhea (common dandruff). SELSUN frequently proved successful after other recognized treatments had failed to produce satisfactory results. These studies showed that SELSUN stops itching and burning symptoms after only two or three applications . . . and that scaling is controlled for one to four weeks.

Patients find SELSUN simple and pleasant to use . . . it is applied while washing the hair, then rinsed out. As a result, the scalp is left clean and odorless, and there is no oily residue to come off on clothing or linens. Toxicity studies<sup>1,2</sup> show there are no harmful effects when used externally as recommended.

Designed strictly for the medical profession, SELSUN is available *only on a physician's prescription*. It is supplied by pharmacies in 4-fluidounce bottles with tear-off labels. **Abbott**

**References:**

1. Slinger, W. N., and Hubbard, D. M. (1951), Arch. Dermat. & Syph., 64:41, July.
2. Slepyan, A. H. (1952), Ibid., 65:228, February.
3. Ruch, D. M. (1951), Communication to Abbott Laboratories.

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1

*Before treatment with Selsun*

**CLINICAL PHOTOGRAPHS** showing effect of SELSUN on pityriasis sicca



2

*After two weeks of treatment*

**Patient applied SELSUN twice a week for two weeks, once a week for next four weeks**



3

*After six weeks of treatment*

**Less than 1% nicotine—**

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plantation of one or both sides. Salpingostomatoplasty and salpingostomy were sometimes used. In 3 cases side-to-end tubal implantations were done.

Salpingography and tubal insufflation, or both, were performed for 36 of the women, with proved tubal permeability in 23.

2

*Treatment for Myasthenia Gravis.* Pyridostigmin, a pyridine analogue of Prostigmin, is a slower and longer acting drug that may be successfully used in treatment of patients with myasthenia gravis. Since the onset of action is slow, the drug is indicated for maintenance therapy only, especially for overnight dosage, permitting the patient to care for himself in the morning.

Drs. Helmut Bauer and Otto Schmid of the University of Hamburg report that pyridostigmin is well tolerated. Doses are adjusted to the individual case; up to 600 mg. have been given daily, causing mild sweating and increased peristalsis only in 1 of 5 cases. The untoward symptoms responded well to belladonna.

3

*Intraarterial Therapy in Tetanus.* Higher concentrations of antitoxin are obtained in the brain when the antitetanus serum is injected into the internal carotid arteries rather than subcutaneously, intramuscularly, or intravenously. Dr. F. Kootz of the University of Tübingen finds that administration by the latter routes results in considerable dilution before the antitoxin

(Continued on page 222)



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Join the thousands of doctors who use AO Hb-Meters to avoid needless delay in determining hemoglobin concentration. Determinations may be conveniently performed at the bedside in less than three minutes. A single drop of blood is placed on the glass chamber and agitated with a hemolysis applicator. Once hemolysis is complete, the chamber is inserted in the Hb-Meter, and the hemoglobin concentration read directly from the graduated scales on the instrument. No dilutions or volumetric measurements necessary...sources of error minimized...laboratory accuracy achieved consistently.

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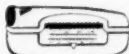
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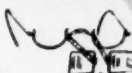
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RECOMMEND  
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reaches the brain. The effect on the brain ganglia is further diminished by the insignificant permeability of the blood-brain barrier. Danger of complications from the arterial puncture is insignificant.

Injections were given to 34 patients with tetanus, 11 by way of both internal carotid arteries, usual serum-toxoid treatment also being employed. The other 23 were treated conventionally. Only 2 of the 11 patients given the serum intra-arterially died, compared to 14 mortalities among the other 23.

4

**PAS and Gravidity.** All antibacterial agents interfere to some extent with the metabolism of the host organism. Because of the reported antimetabolic action of PAS, Drs. Wilhelm Föllmer and Ilse Mayer of the University of Frankfurt am Main investigated the effects of the compound upon pregnancy and offspring in rats. Amounts of PAS comparable with human therapeutic dosage significantly reduced the number and viability of the rats' offspring. No such effect was seen with choline or streptomycin. These findings cannot be directly applied to human beings but should mitigate against indiscriminate prescription of the drug for gravidas.

5

**Tuberculosis of the Larynx.** Isonicotinyl hydrazide appears to be more successful than previously used medications in treatment for tuberculosis of the larynx. Therapeutic effects are better and tolerance is greater, finds Dr. R. Link

(Continued on page 226)

**A DECADE OF WIDE  
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endocrine  
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is a key  
to well-being  
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<b>DIOGYNETS*</b>	Estradiol, U.S.P., Transmucosal Tablets 0.125 mg., 0.25 mg. and 1.0 mg.
<b>DIOCYN*-E</b>	Ethinyl Estradiol Tablets 0.02 mg., 0.05 mg. and 0.5 mg.
<b>DIOCYN*</b>	Estradiol, U.S.P., in Aqueous Suspension 0.25 mg. and 1.0 mg. per cc.; in single-dose disposable STERAJECT cartridges and in 10 cc. multiple-dose vials
<b>DIOCYN*-B</b>	Estradiol Benzoate, U.S.P., in Sesame Oil 0.33 mg. and 1.0 mg. per cc.; in 10 cc. multiple-dose vials
<b>ESTRONE</b>	Estrone, U.S.P., in Aqueous Suspension 2 mg. and 5 mg. per cc.; in 10 cc. multiple-dose vials
<b>SYNGESTROTABS*</b>	Ethisterone, U.S.P., Tablets 10 mg., 25 mg. and 50 mg.
<b>SYNGESTRETS*</b>	Progesterone, U.S.P., Transmucosal Tablets 10 mg., 20 mg. and 50 mg.
<b>SYNGESTERONE*</b> IN SESAME OIL	Progesterone, U.S.P., in Sesame Oil 10 mg., 25 mg., 50 mg. and 100 mg. per cc.; in single-dose disposable STERAJECT cartridges and in 10 cc. multiple-dose vials
<b>SYNGESTERONE*</b> IN AQUEOUS SUSPENSION	Progesterone, U.S.P., in Aqueous Suspension 25 mg. and 50 mg. per cc.; in 10 cc. multiple-dose vials
<b>COMBANDRIN*</b>	Estradiol Benzoate, U.S.P., 1 mg. per cc. and Testosterone Propionate, U.S.P., 20 mg. per cc. in Sesame Oil. In single-dose disposable STERAJECT cartridges and in 10 cc. multiple-dose vials
<b>COMBANDRETS*</b>	Estradiol, U.S.P., 1 mg. and Testosterone, U.S.P., 10 mg. per Transmucosal Tablet
<b>NEODROL*</b>	Stanolone in Aqueous Suspension 50 mg. per cc.; in 10 cc. multiple-dose vials
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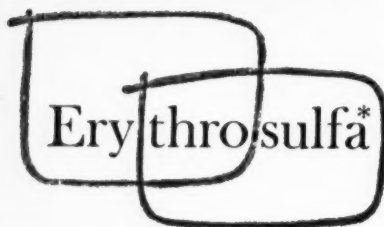
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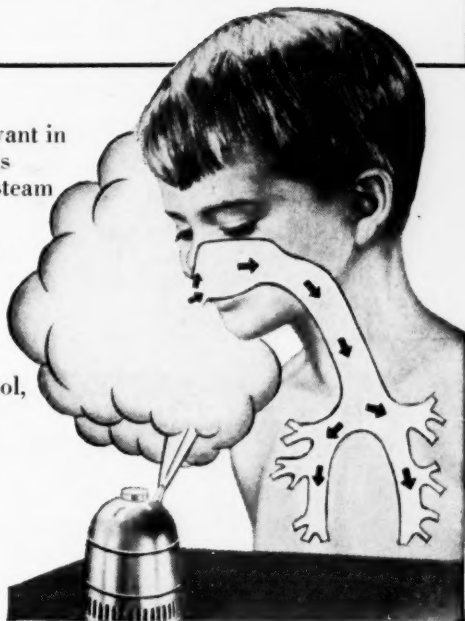
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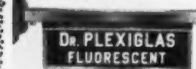
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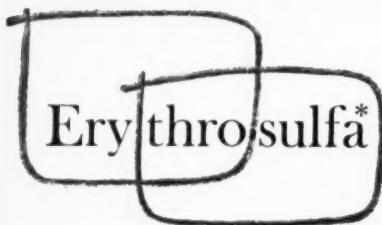
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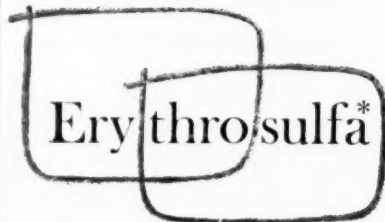
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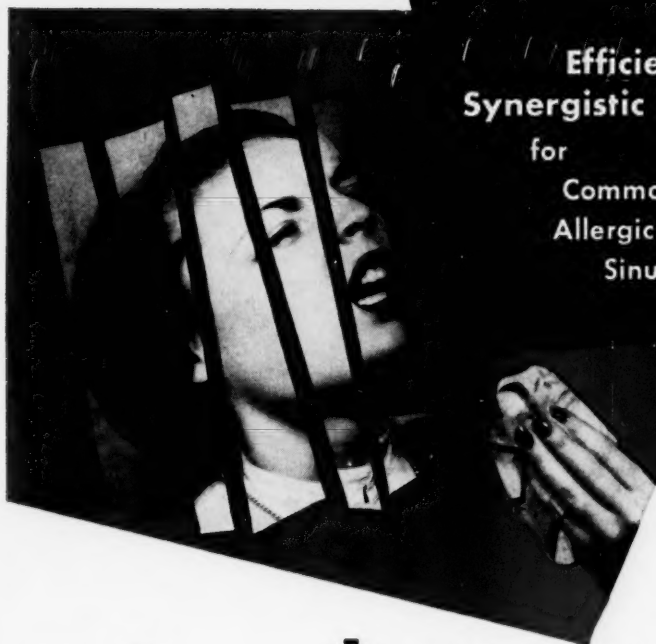
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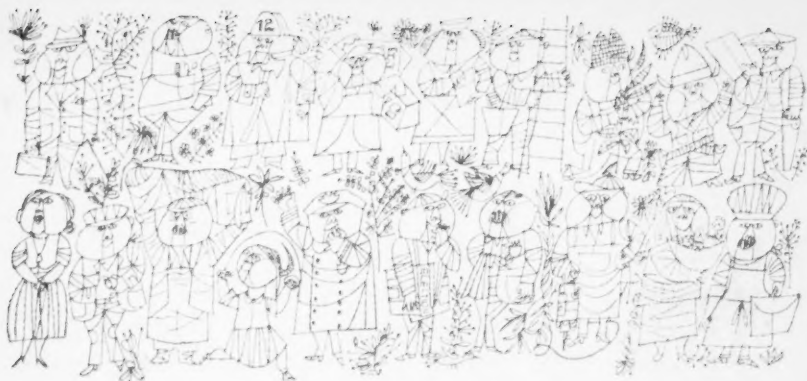
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**Winthrop Stearns INC.**  
New York 18, N. Y. Windsor, Ont.



## speaking of allergy, let's get down to cases

The documented record—more than 900 reports—shows literally thousands of allergic patients relieved of symptoms by Pyribenzamine. Relief has been prompt and prolonged, with extremely low incidence of sedation or other side reactions.

On the basis of published evidence, no other antihistamine combines greater

clinical benefit with greater freedom from side effects. *Supplied:* Pyribenzamine hydrochloride (tripelennamine hydrochloride Ciba) 50 mg. (scored) tablets, bottles of 100 and 1000.

**Pyribenzamine®**



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